

HP 3000 Computer Systems

HEWLETT  PACKARD

Transaction processing systems
for business and industry

Price/configuration guide



The HP 3000 family of computers, comprised of Series 33 and Series III systems, offers you a broad range of capabilities and performance. The expandable hardware configurations and upward software compatibility of all the models allow you to choose the system that best fits your current needs, while protecting your investment for the future. A full range of peripherals, programming languages, data base management packages, and hardware/software options for data communications exist for additional system enhancement. To simplify a comparison of the various systems, the comparison chart outlines the features of each.



HP 3000 Series 33 System



HP 3000 Series III System

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HP 3000 PRODUCT LINE

SERIES 33—SERIES III COMPARISON
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PRODUCTS SUPPORTED ON HP 3000 SYSTEMS

SERIES 33—SERIES III COMPARISON CHART

Series 33

HARDWARE SUPPLIED

256kb to 1024kb fault control semiconductor memory.
Up to 31 terminals
64-bit floating point precision
214 firmware instructions
Up to 4 pairs of asynchronous data communications controllers
Up to 2 printers and controllers
103 and 202S modem control included
4 Mb/second intermodule bus
1 Mb/second general I/O channels
6 standard I/O slots (additional 7 slots available)
Up to 7 additional 7906s, 7920s, or 7925s
Up to 4 magnetic tapes
Flexible disc — 1 Mb

SOFTWARE SUPPLIED

MPE III virtual memory multiprogramming operating system

Languages available include:

- COBOL ■ RPG
- FORTRAN ■ BASIC (compiler & interpreter)
- SPL

File access and organization

Sequential

Direct (Random)

IMAGE/QUERY

Up to 32 data extents.

Data set can cross volume boundary.

KSAM/3000

16 keys

Concurrent update and inquiry capability.

Additional application software

VIEW/3000

MFG/3000

Scientific Library

Terminal type recognition automatic.

Power fail/auto restart.

Up to 255 open files per program.

Spoolfile size is limited to 32 configurable extents.

Up to 32 file extents.

File can cross volume boundary on extent boundary.

Series III

HARDWARE SUPPLIED

256kb to 2058kb fault control semiconductor memory
Up to 63 terminals
64-bit floating point precision
209 firmware instructions
Up to 4 asynchronous terminal controllers
Up to 4 printers and controllers
103 and 212 modem control included
1.9 Mb/second selector channel
9 standard to 29 I/O slots
Up to 7 additional 7920s or 7925s
Up to 7 additional magnetic tapes
Card reader/punch optional
Read 200 cards/minute
Punch/print 45 to 75 cards/minute

SOFTWARE SUPPLIED

MPE III virtual memory multiprogramming operating system

Languages available include:

- COBOL ■ RPG
- FORTRAN ■ BASIC (compiler & interpreter)
- SPL ■ APL

File access and organization

Sequential

Direct (Random)

IMAGE/QUERY

Up to 32 data extents.

Data set can cross volume boundary.

KSAM/3000

16 keys

Concurrent update and inquiry capability

Communications

RJE/3000 DS/3000 MTS/3000 MRJE/3000

Additional application software

VIEW/3000 MFG/3000 SIS/3000

Scientific Library CIS/3000

Terminal type recognition automatic.

Power fail/auto restart

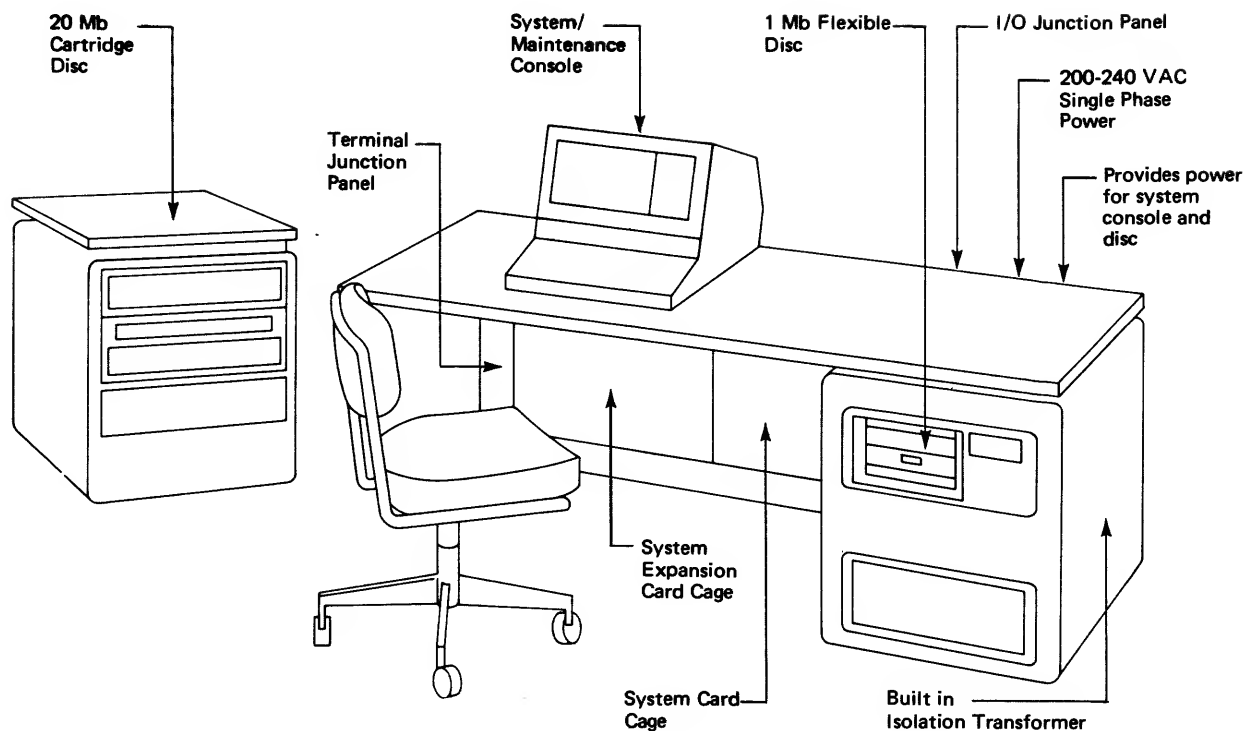
Up to 255 open files per program.

Spoolfile size is limited to 32 configurable extents.

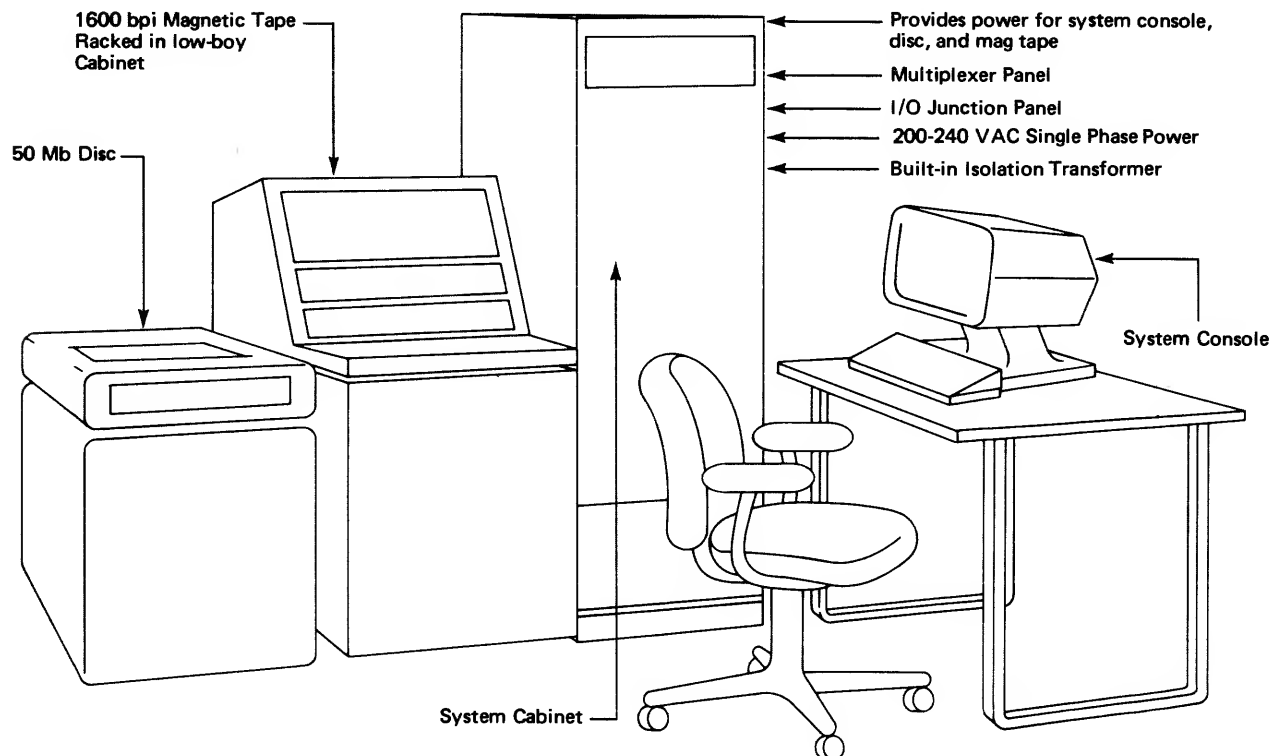
Up to 32 file extents.

File can cross volume boundary on extent boundary.

HP 3000 Series 33 Standard Configuration



HP 3000 Series III Standard Configuration



Products Supported on HP 3000 Systems

Products supported on the Series 33 and Series III are shown in the chart. The support of hardware and software products is

subject to change, however, with new releases of the MPE operating system.

MODEL NO.	DESCRIPTION	SERIES 33	SERIES III
SOFTWARE SUBSYSTEMS			
32205B	Scientific Library	X	X
32213C	COBOL/3000 Compiler	X	X
32104A	RPG/3000 Compiler	X	X
32102B	FORTRAN/3000 Compiler	X	X
32111A	BASIC/3000 Interpreter & Compiler	X	X
32105A	APL/3000 Language Subsystem		X
32209A	VIEW/3000	X	X
32235B	IMAGE and QUERY/3000 Data Base Management Subsystem	X	X
32208A	KSAM/3000 Keyed Sequential Access Method	X	X
30130E	RJE/3000 2780/3780 Emulation		X
32192A	MRJE/3000 Multileaving Remote Job Entry		X
32193A	MTS/3000 Multipoint Terminal Support		X
32190A	DS/3000 Distributed Systems Software		X
32380A	EDC/3000 Engineering Data Control	X	X
32384A	IOS/3000 Inventory and Order Status	X	X
32388A	MRP/3000 Material Requirements Planning	X	X
32900A	SIS/3000 School Information System		X
32902A	CIS/3000 College Information System		X
HARDWARE AND PERIPHERALS			
30032B	Asynchronous Terminal Controller		X
30018A	Asynchronous Data Communications Controller—Main	X	
30019A	Asynchronous Data Communications Controller—Extender	X	
30037A	Asynchronous Repeater		X
30055A	Synchronous Single Line Controller		X
30360A	Hardwired Serial Interface		X
30079A	General I/O Channel	X	
7902A	Flexible Disc Drive	X	
7906S	20 Megabyte Cartridge Disc Drive	X	
7920S	50 Megabyte Disc Drive	X	X
7925S	120 Megabyte Disc Drive	X	X
2621X	Interactive Display Terminal	X	X
2640X	Interactive Display Terminal	X	X
2641A	APL Display Station		X
2645X	Interactive Display Station	X	X
2647A	Intelligent Graphics Terminal	X	X
2648A	Graphics Terminal	X	X
2635A	Printing Terminal	X	X
2631A	Dot Matrix Character Printer	X	
7970B	800 bpi Digital Magnetic Tape Drive		X
7970E	1600 bpi Digital Magnetic Tape Drive	X	X
2613A	Low Speed Line Printer		X
2608A	Dot Matrix Line Printer	X	X
2617A	Medium Speed Line Printer		X
2618A	High Speed Line Printer		X
30106A	Card Reader Subsystem		X
30119A	Card Reader Punch Subsystem		X
30105A	Tape Punch Subsystem		X
30104A	Punched Tape Reader Subsystem		X
30126A	CalComp Plotter Interface Subsystem		X

Support for foreign device users — There may be occasions when it is desired to interface a non-Hewlett-Packard product to an HP 3000. Support for the foreign device and system modifications required to drive it are the responsibility of the customer. If the HP 3000 exhibits problems resulting from the foreign device, the system must be reconfigured to its original Hewlett-Packard configuration and with the current supported version of the operating system before service can be rendered under the Customer Maintenance Agreement. Hewlett-Packard will not warrant compatibility of operating systems, user subsystems, or modifications to Hewlett-Packard hardware necessitated by design updates with any non-Hewlett-Packard product to an HP 3000.

HP 3000 SOFTWARE

HP 3000 SOFTWARE SUPPORT
HP 3000 SOFTWARE PAYMENT PLANS
SOFTWARE ORDERING GUIDE

HP 3000 SOFTWARE SUPPORT

As detailed below, Hewlett-Packard offers a comprehensive set of support services to assist the customer in effectively managing his system software. This support is provided to the customer's designated System Manager or his alternate.

Features of Hewlett-Packard's support include:

- A long-term vendor commitment to high-quality support
- A comprehensive, well-defined set of support services
- The choice of a monthly or a prepaid right-to-use plan
- Flexible support arrangements for multiple HP 3000 installations
- Lower prices for volume purchases

Two levels of software support services are available:

1. Comprehensive Software Support
2. Software Subscription Services.

Comprehensive Software Support

Comprehensive Software Support helps you optimize the power, reliability, and utilization of your Hewlett-Packard software products so that you get the maximum benefit from your HP 3000 system. The support provides your System Manager with a wide variety of services including phone-in consulting and on-site Systems Engineering assistance. In addition, it assigns an HP Systems Engineer to your account. This software expert monitors your operation, coordinates your support and ensures that your needs get prompt and individual attention.

Features

Telephone Assistance: The System Manager will receive telephone numbers for the nearest Phone-In Consulting Service office to assure contact with an HP Systems Engineer to discuss questions and provide advice to resolve any software-related problems. This service is available from 8:30 a.m. to 4:30 p.m., local time, typically with a four-hour response. Hewlett-Packard will assist in identifying, verifying, reporting, and resolving problems which have been isolated by the System Manager. The System Manager may request on-site software assistance by an HP Systems Engineer for the following two classes of problems: 1) Problems that can not be isolated by a telephone conversation, and 2) Problems of a critical nature.

On-Site Software Service: Hewlett-Packard will provide on-site software services for customer's facilities located within a 100-mile radius of HP Computer Systems service facilities. On-site services are available during the hours of 8:30 a.m. to 4:30 p.m., local time at the HP facility, Monday through Friday, exclusive of HP holidays.

An HP Systems Engineer will normally arrive within eight working hours of the telephone request by the System Manager. As in Telephone Assistance, HP will aid the System Manager in identifying, verifying, isolating, and reporting and resolving problems associated with the HP software product. Every effort will be made to identify a "work-around."

If the problem reported is not associated with an HP software design error or system malfunction, the on-site services are considered outside the scope of Hewlett-Packard's software and support agreement and subject to a time and materials charge.

HP is not obligated to provide any on-site services for HP software products which have been modified by the customer or which use privileged mode.

Software Communication: A publication called the "HP 3000 Communicator" will be sent periodically to your System Manager. This publication contains operational tips, programming techniques, available HP documentation, and articles of general interest to HP 3000 users.

Software Problem Documentation: The System Manager will receive "Software Status Bulletins" twice each month. These bulletins will include information regarding software enhancements, current software design errors, and interim programming solutions.

Reference Manual Updates: The System Manager will receive the appropriate software reference manual updates and revisions as HP makes them available.

Software Updates and Enhancements: As software enhancements are made or permanent solutions are developed for known problems, they will be incorporated into an installation tape to be released every three months. A Hewlett-Packard Customer Engineer will install this latest revision of the appropriate software shortly after release (normally at preventive maintenance time).

Software Subscription Service

Software Subscription Service is available after the expiration of the initial Software and Support Agreement. It is intended to provide a customer with documentation updating, software updating, and a vehicle to request software maintenance or enhancements (system engineering service is not included with this plan). This service provides the same Software Communication, Problem Documentation, Updates and Enhancements, and Reference Manual Updates that are included in the Comprehensive Software Support.

For a complete description of Software Support from Hewlett-Packard, see your Hewlett-Packard sales representative.

HP 3000 SOFTWARE PAYMENT PLANS

Plan #1 gives the customer the right to use HP software for a low initial payment and monthly fee for 48 months. After initial payment and 48 monthly fee payments, the customer has the right to use HP software for an unlimited period.

Plan #2 is a one-time payment plan which offers 12 months of Comprehensive Software Support and an immediate right to use HP software on one system for an unlimited period at a single prepaid price.

Both plans include a copy of the software object code, installation of the software, a 90-day warranty period, software documentation, and 12 months (plan #2) or 48 months (plan #1) of Comprehensive Software Support.

At the expiration of plan #1 or #2, the customer may elect to continue purchasing Comprehensive Support or switch to Software Subscription Service only.

HP 3000 Software Price Summary

PRODUCT NO.	PRODUCT	MONTHLY PLAN #1		PREPAID PLAN #2 TOTAL COST	SOFTWARE SUBSCRIPTION SERVICE
		INITIAL FEE	MONTHLY FEE (FOR 48 MOS)		
32412A	Fundamental Operating Software	In System	\$125.00	\$3,750.00	\$35.00
32413A 32435A	(FCOPY, EDIT, SORT SPL, Compiler Library)				
	Languages				
32213C	COBOL	1,500.00	100.00	\$4,500.00	\$30.00
32104A	RPG	1,500.00	100.00	4,500.00	30.00
32111A	BASIC	1,500.00	50.00	3,000.00	15.00
32102B	FORTRAN	1,500.00	50.00	3,000.00	15.00
32105A	APL/3000	5,000.00	125.00	8,750.00	40.00
	Data Entry Data Management				
32208A	KSAM	1,500.00	25.00	2,250.00	10.00
32235B	DBMS (Image & Query)	3,000.00	125.00	6,750.00	40.00
32209A	VIEW	1,500.00	75.00	3,750.00	24.00
	Communications				
32190A	DS/3000	3,000.00	125.00	6,750.00	40.00
30130E	RJE/3000	750.00	25.00	1,500.00	10.00
32192A	MRJE/3000	2,000.00	75.00	4,250.00	25.00
32193A	MTS/3000	1,000.00	50.00	2,500.00	15.00
	Miscellaneous				
32205B	SCIENTIFIC LIBRARY	300.00	25.00	1,050.00	10.00
32900A	SIS	3,000.00	200.00	9,000.00	60.00
32902A	CIS	5,000.00	200.00	11,000.00	60.00
	Manufacturing Systems				
32380A	EDC/3000	5,000.00	150.00	9,500.00	35.00
32384A	IOS/3000	5,000.00	150.00	9,500.00	35.00
32388A	MRP/3000	5,000.00	150.00	9,500.00	35.00

With Plan #1, an order consists of (A) one quantity of the software product and (B) 48 quantities of the monthly fee.

Initial Payment Prices

	SOFTWARE PAYMENT PLAN PER PRODUCT	PRODUCT QUANTITIES		
		INITIAL PAYMENT (PRODUCT NO.)	MONTHLY FEE (22823A OPTION)	PREPAYMENT (PRODUCT NUMBER OPTION 002)
Plan #1	Monthly Plan (initial and monthly fees)	one	48	none
Plan #2	Prepaid (initial fee, option 002, and monthly fees)	one	12	one

Prepayment Options

PRODUCT NUMBER	DESCRIPTION	PRICE	PRODUCT NUMBER	DESCRIPTION	FEE	PRODUCT NUMBER	DESCRIPTION	PRODUCT OPT. 002 PRICE
Included with System	Fundamental Operat- ing Software (FOS) (SPL, FCOPY, SORT, EDIT, Compiler Library).	Included in System Price	22823A	Product Number for FOS. Required for all systems. Add options for software you will use.	\$ 125.00	32412A-002	FOS (Series 33, 60 Hz)	\$2,250.00
	Languages			Languages		32413A-002	FOS (Series 33, 50 Hz)	2,250.00
32105A	APL/3000	\$5,000.00	22823A-001	APL/3000	125.00	32435A-002	FOS (Series III)	2,250.00
32111A	BASIC	1,500.00	22823A-002	BASIC	50.00		Languages	
32213C	COBOL	1,500.00	22823A-003	COBOL	100.00	32105A-002	APL/3000	2,250.00
32102B	FORTRAN	1,500.00	22823A-007	FORTRAN	50.00	32111A-002	BASIC	900.00
32104A	RPG	1,500.00	22823A-011	RPG	100.00	32113C-002	COBOL	1,800.00
	Data Management			Data Management		32102B-002	FORTRAN	900.00
32235B	DBMS (Image & Query)	3,000.00	22823A-008	DBMS (Image & Query)	125.00	32104A-002	RPG	1,800.00
32208A	KSAM	1,500.00	22823A-010	KSAM	25.00		Data Management	
32209A	VIEW	1,500.00	22823A-020	VIEW	75.00	32235B-002	DBMS (Image & Query)	2,250.00
	Communications			Communications		32208A-002	KSAM	450.00
32190A	DS/3000	3,000.00	22823A-005	DS/3000	125.00	32209A-002	VIEW	1,350.00
30130E	RJE/3000	750.00	22823A-006	RJE/3000	25.00		Communications	
32192A	MRJE/3000	2,000.00	22823A-015	MRJE/3000	75.00	30190E-002	DS/3000	2,250.00
32193A	MTS/3000	1,000.00	22823A-019	MTS/3000	50.00	30130E-002	RJE/3000	450.00
	Manufacturing Systems			Manufacturing Systems		32192A-002	MRJE/3000	1,350.00
32380A	EDC/3000	5,000.00	22823A-016	EDC/3000	150.00	32193A-002	MTS/3000	900.00
32384A	IOS/3000	5,000.00	22823A-017	IOS/3000	150.00		Manufacturing Systems	
32388A	MRP/3000	5,000.00	22823A-018	MRP/3000	150.00	32380A-002	EDC/3000	2,700.00
	Miscellaneous			Miscellaneous		32384A-002	IOS/3000	2,700.00
32205B	Scienfific Library	300.00	22823A-012	Scientific Library	25.00	32388A-002	MRP/3000	2,700.00
32900A	SIS	3,000.00	22823A-013	SIS	200.00		Miscellaneous	
32902A	CIS	5,000.00	22823A-014	CIS	200.00	32205B-002	Scientific Library	450.00
						32900A-002	SIS	3,600.00
						32902A-002	CIS	3,600.00

HP 3000 SERIES 33

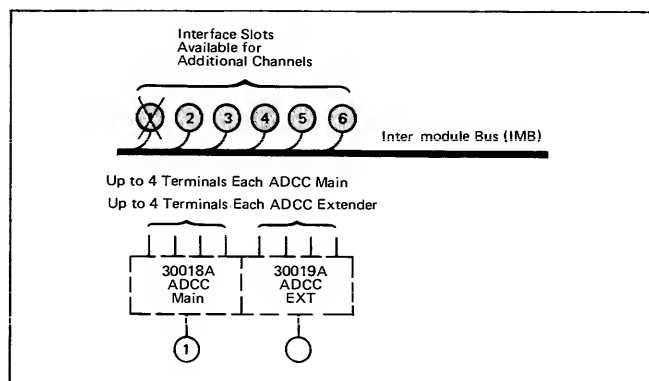
HOW TO CONFIGURE AN HP 3000 SERIES 33 SYSTEM
SERIES 33 CONFIGURATION GUIDE
SERIES 33 CONFIGURATION DIAGRAM
SERIES 33 SYSTEM PRICING GUIDE
SERIES 33 CONFIGURATION EXAMPLE

HOW TO CONFIGURE AN HP 3000 SERIES 33 SYSTEM

To aid in configuring an HP 3000 Series 33 system, a diagram is included on a following page. By following the steps indicated, it is simple to plan a new system or add to an existing one.

Selection Options

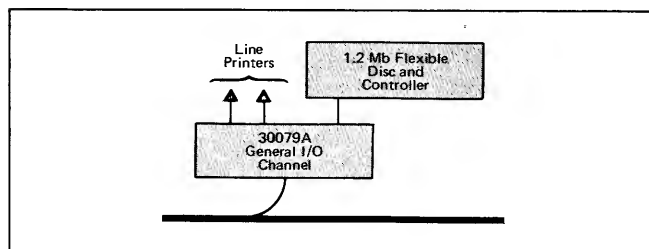
When choosing options denoted by "circles," be certain to write the number of the interface slot which the option will occupy in the open circle beside the selected option, then cross out the numbered circle connected to the Intermodule Bus (IMB) to show that interface slot is no longer available. For example,



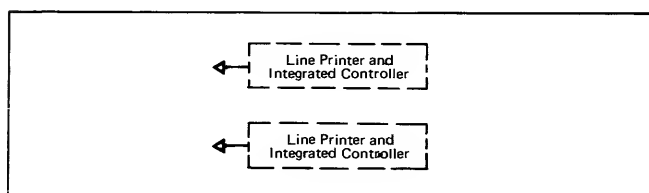
As a result, the options that have been chosen and the interface slots they occupy will be evident at a glance. DO NOT EXCEED THE TOTAL NUMBER OF AVAILABLE INTERFACE SLOTS ON THE INTER MODULE BUS.

Devices identified with triangles or squares will function only in the positions designated by matching geometric shapes.

Equipment Supplied (Standard Configuration). Products in "gray" outlined by "solid lines."



Optional Equipment. Products in "white" outlined by "dashed lines."



Connecting Additional Channels. Spare interface slots (numbered "circles") connected to the IMB are available for additional devices and can be interfaced to either Asynchronous Data Communication Controllers (ADCC's) or General I/O Channels (GIC's) identified with attached "circles."

Connecting Additional Terminals. Two Asynchronous Data Communications controllers are supplied in the base system (ADCC Main and ADCC Extender). These permit the connection of the system/maintenance console and up to seven terminals. Additional terminal capacity may be added in groups of four to allow interfacing up to 32 terminals including the system console. Always add an ADCC extender to an existing ADCC main before adding another ADCC main.

Disc Drives. One 19.6 Mb 7906 disc subsystem with controller built-in is supplied in the base system connected to a high speed general I/O channel (GIC). Optionally, 50 Mb or 120 Mb disc subsystems are available. The controller can handle a total of eight drives, hence 960 Mb maximum capacity for the system.

Magnetic Tape Units. One Master 1600 bpi magnetic tape master drive with integrated controller is available and must be attached to a dedicated general I/O channel (GIC). Up to three additional slave magnetic tape drives may be attached to the master. All magnetic tape drives are enclosed in separate lo-boy cabinets with sloping front access to the drives.

Line Printers. A line printer with integrated controller can be attached to the second general I/O channel supplied with the base system. This is the same GIC that interfaces to the flexible disc. A maximum of two line printers, each with its own integrated controller, may be added to the system.

Additional Memory. 256 kb of fault control memory is supplied with the base system. System memory sizes of 512 kb, 768 kb, and 1024 kb are also available. Up to 1024 kb, order the proper number of 128 kb memory array boards to constitute the desired size system.

I/O Expansion. To obtain additional I/O slots (beyond the six in the base system) order an expansion kit (30416A).

Environmental Specifications

The following specifications apply to any HP 3000 Series 33 configured with any combination of the peripherals listed. It is not necessary to consider each device separately.

Temperature (operating): 50°–104°F (10°–40°C)

Relative Humidity: 30–80% non-condensing. 60% optimal. Maximum wet bulb temperature, 78°F (26°C)

Line Voltage: 200/210/220/230/240 VAC +4%, –10% single phase

Line Frequency: 50 or 60 Hz ±0.5 Hz

Maximum Rate of Temperature Change: 18°F/Hr (10°C/Hr)

HP 3000 SERIES 33 CONFIGURATION GUIDE

Hardware Supplied

- Central processing unit (CPU)
- 214 instructions
- System clock
- 8 asynchronous terminal ports via two asynchronous data communications controllers (ADCCs)
- Modem support (for type 103/202S)
- General I/O channel for discs
- General I/O channel for line printers and flexible disc
- 256 kb fault control memory with memory controller
- System desk, mainframe, one card cage, and power supplies
- System console/maintenance console
- 7906 19.6 Mb disc with controller
- 1.2 Mb flexible disc with controller (double sided)
- 6 spare I/O slots and space for 1024 kb memory
- Room for 31 terminals plus system console
- Built-in isolation transformer

Software Supplied

- Multiprogramming Executive III operating system (MPE III)
- HP 3000 Series Fundamental Operating Software (initial payment in system price) which includes:
 - System Programming Language (SPL)
 - Text editor (EDIT)
 - File-copying utility (FCOPY)
 - Sort and merge package (SORT)
 - Compiler library

Site Preparation Data for Standard Series 33

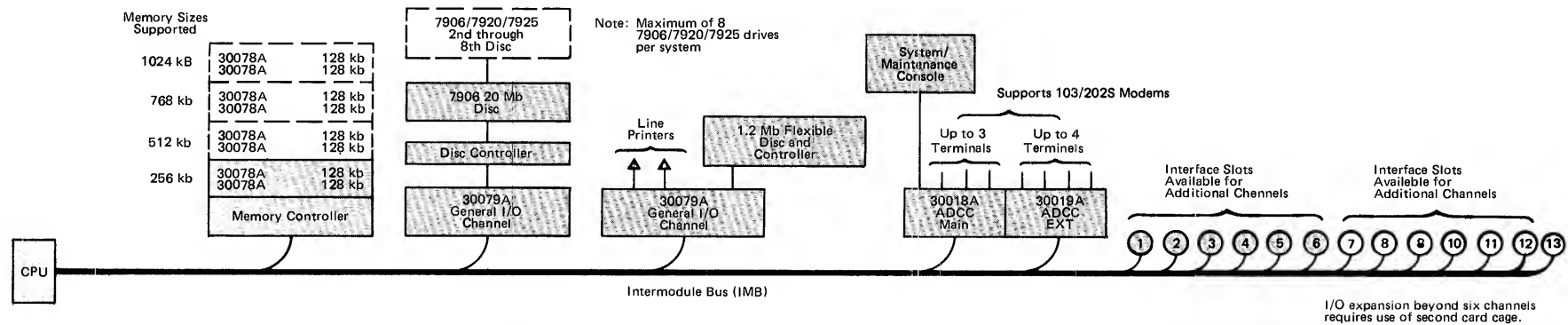
	HP7906M 20 Mb DISC DRIVE		SYSTEM CABINET		CRT CONSOLE	
	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)
VOLTAGE (single phase)	115	230	200-240	200-240	115	230
CURRENT	8.7A*	4.4A*	24.0A*	24.0A*	2.2A*	1.1A*
HEAT OUTPUT (per hour)	1920 btu	480 kcal	5300 btu	1325 kcal	560 btu	140 kcal
WEIGHT	270 lb	122 kg	710 lb	322 kg	50 lb	23 kg
SIGNAL CABLE LENGTH	Note 1	Note 1	—	—	Note 2	Note 2

Note 1: Up to seven slave disc drives may be daisy chained from a controller within the master drive. The cable length from system to master drive is 19.5 ft (6M). The cable length between drives is 8 ft (2.4M). In addition, each slave drive has a cable back to the controller. The length of this cable for each drive is 50 ft (15.2M). The maximum cumulative length of daisy-chained cable is 74 ft (22.5M).

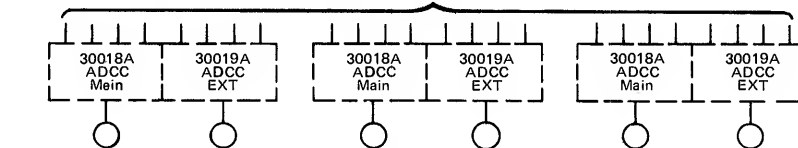
Note 2: The system console is cabled to remain on the system table.

**System cabinet alone draws up to 10 amps; remaining 14 amps are available for up to four peripherals through an outlet in the rear of the cabinet.*

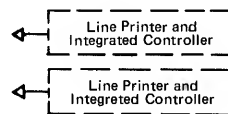
MAXIMUM CONFIGURATION DIAGRAM FOR SERIES 33



Up to 4 Terminals Each ADCC Main (Asynchronous Data Communications Controller) Up to 4 Terminals Each ADCC Extender

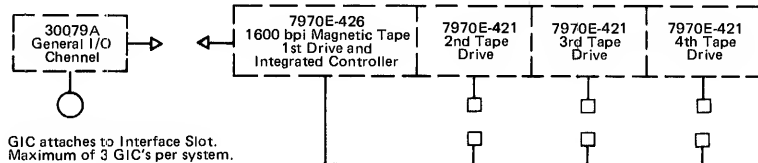


Note: Maximum of 31 terminals per system plus console. ADCCs connect to interface slots. To expand terminal capacity, always add the extender ADCC before another main ADCC. ADCC main supports 103 modems and 202S modems in the U.S. Addition of ADCC extender adds European 202S modem support to all eight Terminal ports.



Note: Maximum of 2 line printers per system (Models 2608A-333 or 2631A-333)

Line printers attach to General I/O Channel with 7902 flexible disc.



Note: Maximum of 4 tape drives per system. Magnetic tape drive controller attaches to a dedicated general I/O channel.

SOFTWARE

Fundamental Operating Software	
32102B FORTRAN Compiler	32208A KSAM
32104A RPG Compiler	32209A VIEW
32205B Scientific Library	32380A EDC/3000
32111A BASIC	32384A IOS/3000
32213C COBOL Compiler	32388A MRP/3000
32235B IMAGE/QUERY	

HP 3000 SERIES 33 SYSTEM PRICING GUIDE

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE†	MONTHLY MAINT. CHARGE†
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HP 3000 Series 33 System

32412A (US version)		HP 3000 Series 33 Computer System: 200-240V, 60 Hz, single phase; 256kb memory; 20 Mb 7906; 1 Mb 7902 flexible disc; HP 3000 System console/maintenance console; 8 port asynchronous data communications controller; 103 and 202S modem capability; 2 general I/O channels; remote diagnostic capability; system desk mainframe. MPE III operating system. Initial payment for Fundamental Operating Software (SPL; EDIT; FCOPY; SORT; Compiler Library); 48 additional monthly software fee payments required. Complete user manual set.	\$58,500.00	\$ 410.00
	002	Prepaid purchase option of HP 3000 Fundamental Operating Software; (SPL; EDIT; FCOPY; SORT; Compiler Library)	2,250.00	0.00
	120	Replace 20 Mb 7906 disc with 50 Mb 7920 disc.	3,000.00	-1.00
	125	Replace 20 Mb 7906 with 120 Mb 7925 disc.	7,000.00	+6.00
32413A (Inter- national version)		HP 3000 Series 33 Computer System: 200-240V, 50 Hz, single phase; 256kb memory; 20 Mb 7906 disc; 1 Mb 7902 flexible disc; HP 3000 System console/maintenance console; 8 port asynchronous data communications controller; 103 and 202S modem capability; 2 general I/O channels; remote diagnostic capability; system desk mainframe. MPE III operating system. Initial payment for Fundamental Operating Software (SPL; EDIT; FCOPY; SORT; Compiler Library); 48 additional monthly software fee payments required. Complete user manual set.	58,500.00	410.00
	002	Prepaid purchase option of HP 3000 Fundamental Operating Software (SPL; EDIT; FCOPY; SORT; Compiler Library)	2,250.00	0.00
	120	Replace 20 Mb 7906 disc with 50 Mb 7920 disc.	3,000.00	-1.00
	125	Replace 20 Mb 7906 disc with 120 Mb 7925 disc.	7,000.00	+6.00

Memory and I/O Expansion

30078A		128kb Fault Control 16K RAM Semiconductor Memory Array. Order 128kb arrays so that resulting system is 512kb, 768kb, or 1024kb.	\$ 4,000.00	\$ 15.00
30018A		Asynchronous Data Communications Controller (ADCC) – Main (4 terminal ports). Includes 103 and 202 (US only) type modem support and 9600 baud communications.	1,600.00	7.00
30019A		Asynchronous Data Communications Controller (ADCC) – Extender (4 terminal ports). Includes European 202S type modem support for ADCC-M and ADCC-E and 9600 baud communications. Order ADCC Extender after an ADCC Main.	1,600.00	7.00
30079A		General I/O Channel (GIC). Order to support magnetic tape drives on system.	1,800.00	10.00
30416A		HP 3000 Series 33 Expansion Kit. Includes second card cage, cooling unit, and power supply. Provides 7 additional I/O slots.	7,500.00	20.00

† Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Disc Memories

7906S		19.6 Mb Add-on Disc Drive. For use as second through eighth add-on drive. Includes 7906, cartridge, low-profile cabinet, and cables (multi-unit 8 ft and data cable 50 ft).	\$10,000.00	\$ 55.00
	015	230V/50 Hz single phase operation. Specify destination country for correct power cord.	0.00	0.00
7920S		50 Mb Add-on Disc Drive. For use as second through eighth add-on drive. Includes 7920, 13394A disc pack, cabinet, and cables (multi-unit 8 ft and data cable 50 ft).	13,000.00	54.00
	015	230V/50Hz single phase operation. Specify destination country for correct power cord.	0.00	0.00
7925S		120 Mb Add-on Disc Drive. For use as second through eighth add-on drive. Includes 7925, 13356A disc pack, cabinet and cables (multi-unit 8 ft and data cable 50 ft).	17,000.00	62.00
	015	230V/50 Hz single phase operation. Specify destination country for correct power cord.	0.00	0.00
12940A		7906 Disc Cartridge	180.00	0.00
13394A		7920 Disc Pack	600.00	0.00
13356A		7925 Disc Pack	850.00	0.00

Magnetic Tape Drives

7970E		1600bpi, 45 ips Mag Tape Drive. Must order option 426 for master or 421 for slave drive. 9 track phase encoded, 115V/230V switch; 50/60 Hz. Power Cord supplied.	\$ 8,885.00	\$ 70.00
	426	Specifies HP-IB Master drive. Includes lo-boy cabinet and HP-IB integrated controller. 2 meter HP-IB data cable is included.	3,115.00	23.00
	421	Specifies HP-IB Slave drive. Includes lo-boy cabinet and multi-unit cable (20 ft).	-105.00	-3.00

Line Printers

2631A		180 cps Dot Matrix Printer. Must order option 333. Pedestal stand not included.	\$ 3,150.00	\$ 31.00
	015	230V, 50 Hz	0.00	0.00
	333	Series 33 option with HP-IB interface and 2 Meter cable	290.00	0.00
		Additional Products		
26098A		Pedestal Stand for 2631A	275.00	0.00
	001	Add casters	15.00	0.00
	002	Add paper catcher	50.00	0.00
		02631-60060 ribbon cartridge — qty 1	15.00	0.00
		qty 6	72.00	0.00
		qty 12	126.00	0.00
		<i>Note: Print head is included in Monthly Maintenance Charge.</i>		

continued

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Line Printers (continued)

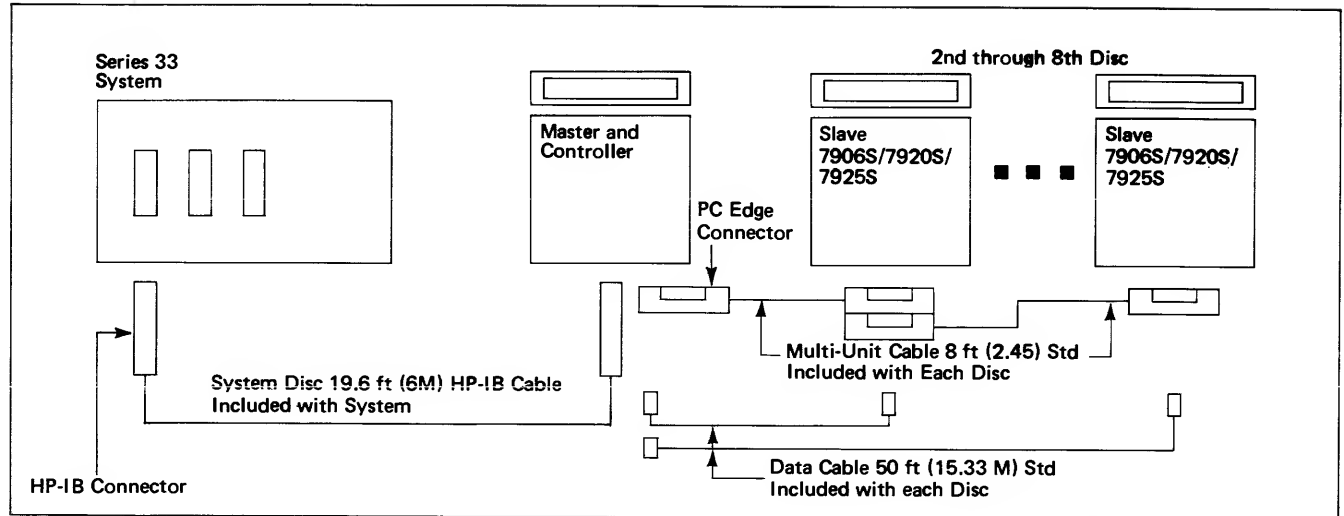
2608A		400 Ip m Dot Matrix Printer. Must order option 333. 128 character USASCII set. Includes enclosed stand with caster, paper basket. Monthly maintenance charge allows three levels of monthly usage. Level 1: 1-69 print hours Level 2: 70-130 print hours Level 3: 131-360 print hours	\$ 9,250.00	
				\$ 62.00
				71.00
				125.00
	015	230V, 50 Hz	0.00	0.00
	110	Add sound cover	150.00	0.00
	333	Adds HP 3000 Series 33 HP-IB interface, 2 Meter Cable, documentation, and installation.	565.00	0.00

HP- IB Cables

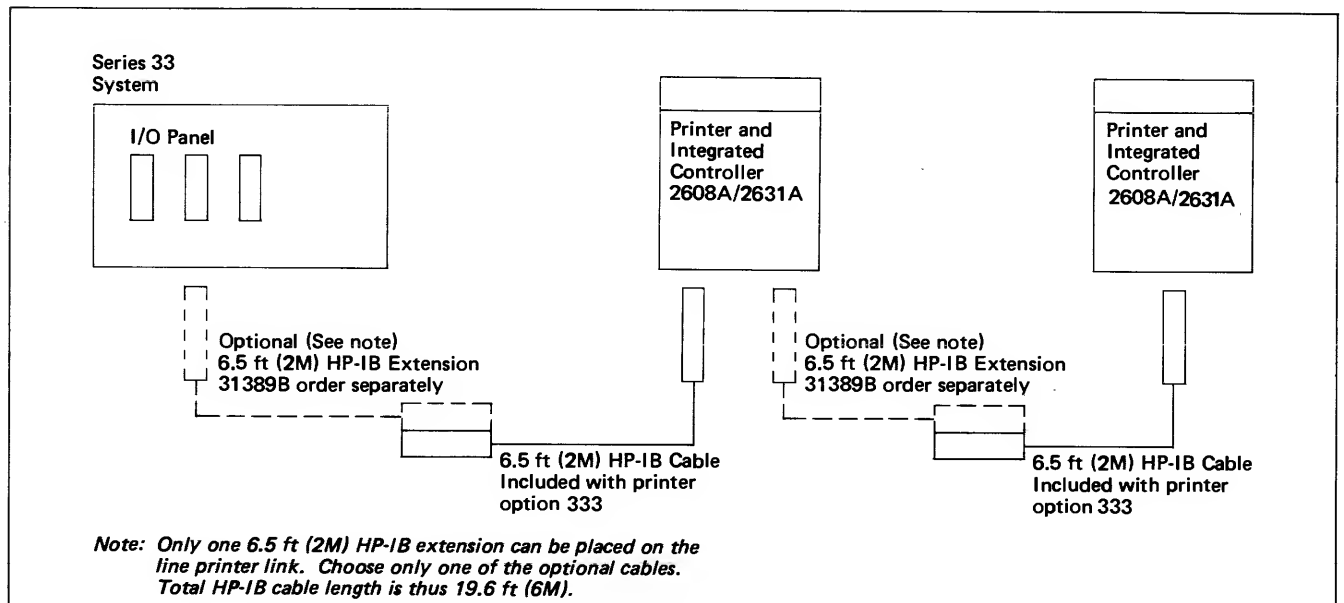
31389A		HP-IB Cable. 1M (3 ft)	\$ 60.00	\$ 0.00
31389B		HP-IB Cable. 2M (7 ft)	65.00	0.00
31389C		HP-IB Cable. 4M (13 ft)	75.00	0.00

SERIES 33 PERIPHERAL CABLES

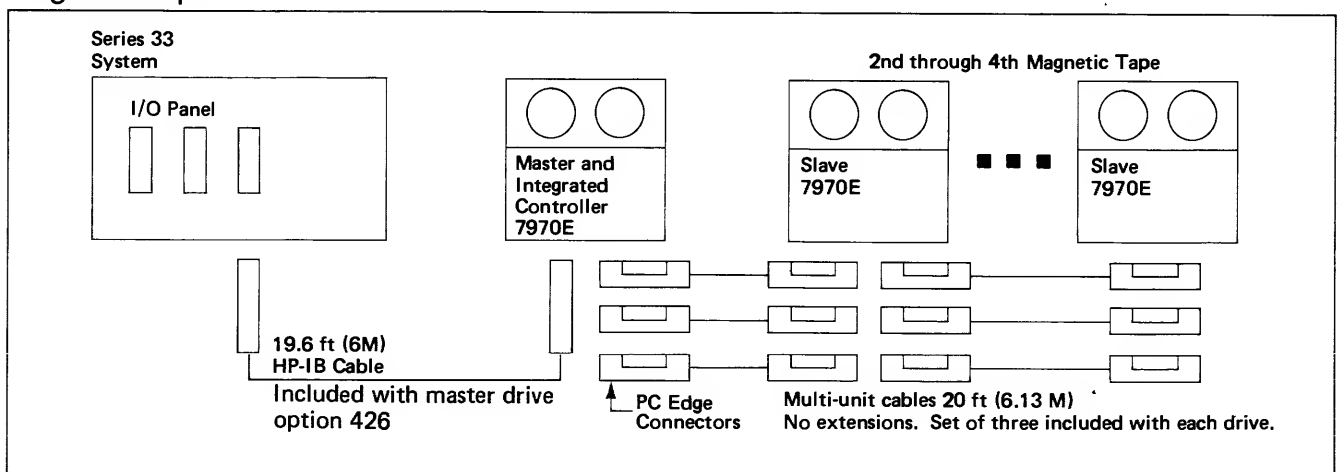
Discs



Printers



Magnetic Tapes



PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Interactive Display Terminals

2621A		Interactive Terminal. 115V, 60 Hz	\$ 1,450.00	\$ 15.00
	013	240V, 50 Hz operation	0.00	0.00
	014	100V, 60 Hz operation	0.00	0.00
	015	220V, 50 Hz operation	0.00	0.00
	016	100V, 50 Hz operation	0.00	0.00
2621P		Interactive Terminal with Printer. 115V, 60 Hz	2,550.00	25.00
	015	230V, 50 Hz operation	0.00	0.00
	016	115V, 50 Hz operation	0.00	0.00
2640B		Display Terminal	2,600.00	18.00
	015	230V, 50 Hz operation	0.00	0.00
	016	115V, 50 Hz operation	0.00	0.00
2645A		Display Station	3,500.00	20.00
2647A		Intelligent Graphics Terminal	8,300.00	50.00
2648A		Graphics Terminal	5,500.00	22.00
		The following options apply to 2645A , 2647A , and 2648A except as noted.		
	007	Integrated dual cartridge tapes (standard on 2647A)	1,600.00	6.00
	013	5 mini-cartridges	90.00	0.00
	015	230V, 50Hz	0.00	0.00
	016	115V, 50 Hz	0.00	0.00
	030	Delete standard asynchronous communications interface for multipoint applications. Order 13260 product to support multipoint communications.	-160.00	0.00
	031	Delete standard asynchronous communications interface to free one option slot. (For 2647 only)	-75.00	0.00
		Note: Cable is not included with display terminals. Order separately as described in Point-to-Point Cable Configuration diagrams.		
		Terminal Expansion for 264x Display Terminals		
13234A		Terminal 4K Memory Module	300.00	0.00
13231A		Display Enhancements — blinking, half bright, underline, and 64 character line drawing	250.00	0.00
	201	Add Math Symbols Alternate Character Set	100.00	0.00
	203	Add Large Character Alternate Character Set	150.00	0.00
13240A		Option Slot Extender. Adds 5 slots for 2640 Terminals only	150.00	0.00

Note: See Terminal Option Summary Chart that follows for complete details.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Printing Terminal

2635A		Printing Terminal. 180 characters per second. Automatic bidirectional print-printing, underline and display function modes. 8 channel fixed VFU (non-programmable). EIA RS232C interface without modem control. (For use with 103-type modems or some hardwired applications.) 115 volts, 60 Hz. Includes terminal and 12.5 ft male-to-male cable.	\$ 3,450.00	\$ 31.00
	015	230V, 50 Hz	0.00	0.00
	715	Adds service documentation	15.00	0.00
		Additional Products:		
26097A		Stand for 2635A	275.00	0.00
	001	Add Casters	15.00	0.00
	002	Add paper catcher	50.00	0.00

Terminal Cables (2620 Series)

13222C		RS232 Cable. Female, 2 meters (6.5 feet).	\$ 50.00	0.00
13222M		European Modem Cable. Male, 5 meters (16 feet).	75.00	0.00
13222N		U. S. Modem Cable. Male, 5 meters (16 feet).	75.00	0.00

Terminal Cables (2640 Series)

30062B		Data Set Cable. Connects HP 3000 Asynchronous RS-232 port to a Bell 103 or 202S type modem; 25 feet (7.6m) long with male-to-male RS-232C connectors.	\$ 65.00	\$ 0.00
	001	Replace 25 foot (7.6m) cable with 50 foot (15.2m) cable	+30.00	0.00
30062C		Modem Extender Cable. Multipurpose extension, 25 feet (7.6m) long with male-to-female RS 232C connectors. All 25 pins connected end to end.	105.00	0.00
	001	Replaces 25 foot (7.6m) cable with 50 foot (15.2m) cable	+40.00	0.00
	002	Replaces 25 foot (7.6m) cable with 100 foot (30.4m) cable	+95.00	0.00
13232N		Terminal Cable. (name on hood: 103/202 modem cable); connects 2640 series terminals to 103 or 202 type modem or to HP 3000 System; 15 feet (4.6m) long with male-to-PC edge connector connectors. Shielded.	75.00	0.00
13232A		Terminal Cable. Same 13232N, but not shielded.	50.00	0.00
13232M		European Modem Cable. For connection of 2640 series terminals to European modems; 15 ft. (4.6m) long with male-to-PC edge connector connectors.	75.00	0.00

INTERACTIVE DISPLAY TERMINAL OPTION SUMMARY CHART

	2640B	2645A	2647A	2648A	2621A/P
Maximum Baud Rate (see Note 1)	2400	9600	9600	9600	9600
Memory	5-8 kb	4-12 kb	9 kb max.	8-12 kb	48 lines
Block or character mode (see Note 2)	STD	STD	STD	STD	Char. mode only
Inverse Video	STD	STD	STD	STD	N/A
Underline, Half-bright, Blinking (Available by ordering 13231A)	AVAIL	AVAIL	AVAIL	AVAIL	Underline Only
User-definable Soft Keys	N/A	8 STD	8 STD	9 STD	N/A
Option slots supplied	2	7	1	4	none
Character set supplied (see Note 4)	128 Roman	128 Roman	128 Roman	128 Roman	128 Roman
Other (see Note 3)			Graphics & Intelligence	Graphics features	120 cps thermal printer on 2621P
Lower case/displayable control codes (see Note 4)	STD	STD	STD	STD	STD
Integrated dual cartridge tapes	N/A	OPT	STD	OPT	N/A
5 mini-cartridges	N/A	OPT	OPT	OPT	N/A
230V, 50 Hz operation	OPT	OPT	OPT	OPT	(Note 5)
115V, 50 Hz operation	OPT	OPT	OPT	OPT	OPT
Delete standard asynchronous communications interface	N/A	OPT	OPT	OPT	N/A
Add math symbols alternate character set	AVAIL	AVAIL	AVAIL	AVAIL	N/A
Add large character alternate character set (Alternate character sets available by ordering 13231A)	AVAIL	AVAIL	AVAIL	AVAIL	N/A

KEY:

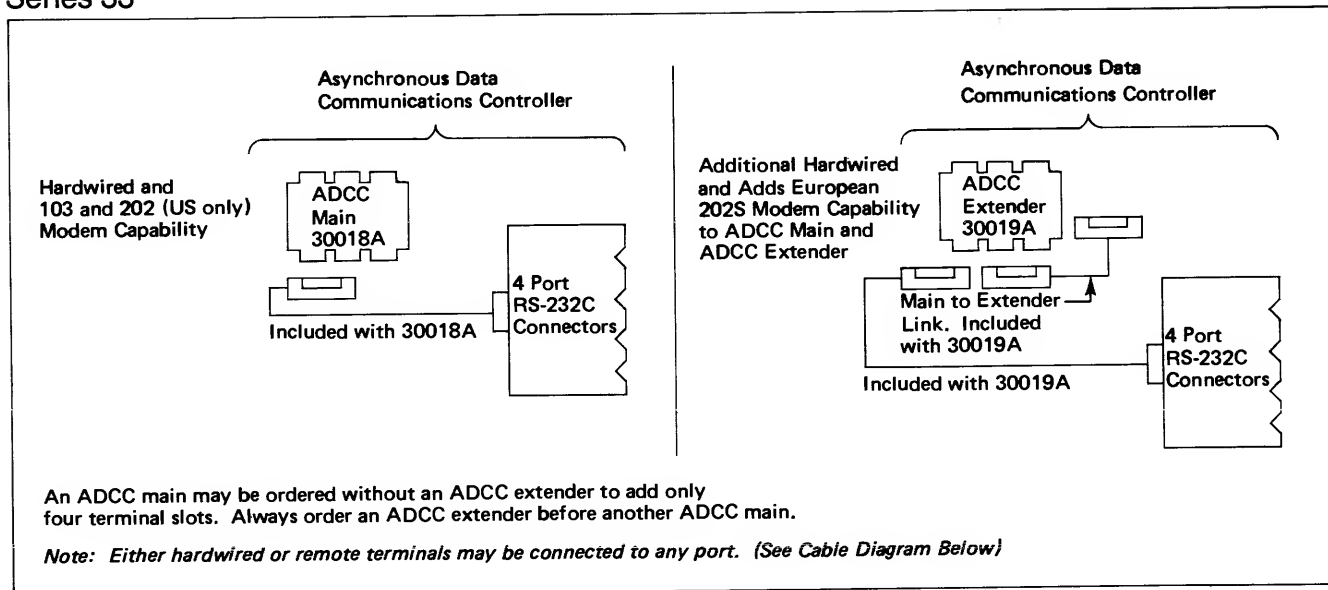
STD—Standard with terminal, OPT—Option ordered with terminal, AVAIL—Order separate product, N/A—Not Available.

NOTES:

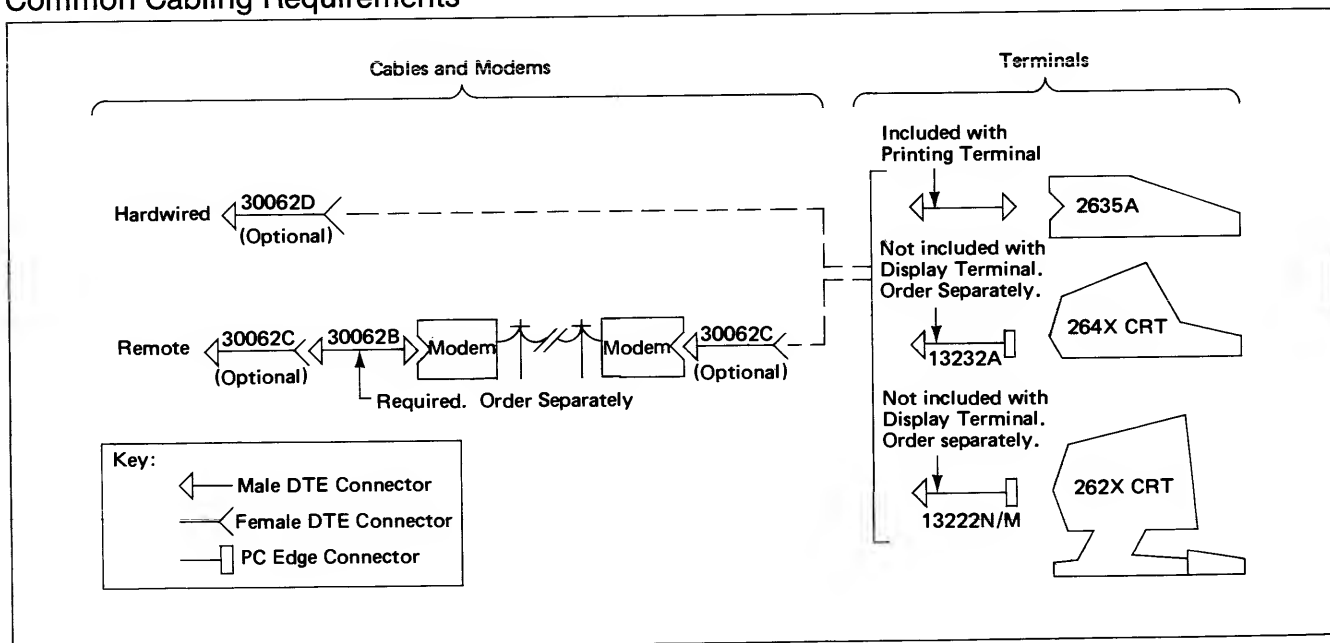
1. The maximum data rate is 2400 baud for 2640 terminals and 9600 baud for 2645, 2647, 2648, and 2621A/P terminals on HP 3000 Series 33 systems.
2. Terminals on the HP 3000 normally operate in character mode, except when accessed via MFG/3000, VIEW/3000, or MTS/3000 where block mode is employed. Terminals without block mode cannot run MFG/3000, VIEW/3000, or MTS/3000.
3. The 2647A and 2648A are supported on the HP 3000 as a 2645A. Development of software to make full use of graphics features and intelligent terminal capabilities on the HP 3000 is the responsibility of the user.
4. Non-standard characters in the International character sets and the display enhancement control characters must be handled by user application programs.
5. Voltages available at 50 Hz are:
2621A 220/240V
2621P 230V

POINT-TO-POINT CABLE CONFIGURATIONS

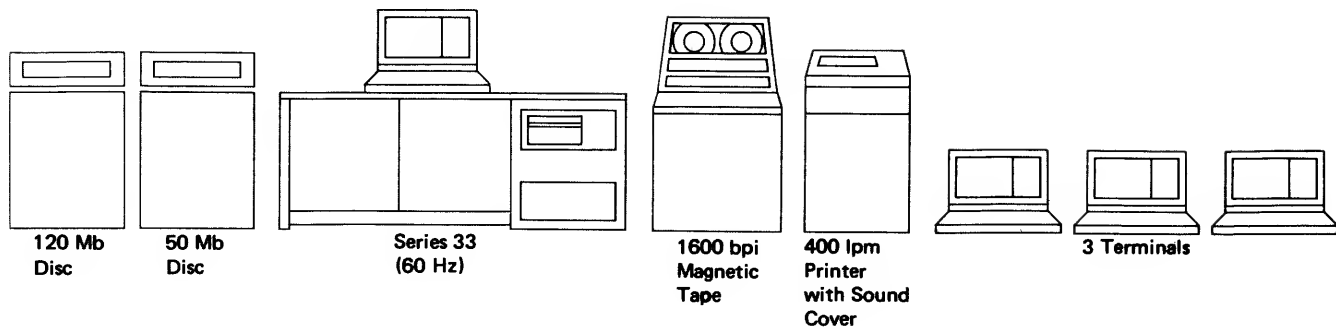
Series 33



Common Cabling Requirements



SERIES 33 CONFIGURATION EXAMPLE



PRODUCT NUMBER	UNITS	PRODUCT	PRICE	MONTHLY MAINT. CHARGE
32412A	1	Series 33 (60 Hz)	\$ 58,500.00	\$ 410.00
32412A-120	1	Replace 20Mb system disc with 50Mb disc	3,000.00	-1.00
7925S	1	120 Mb disc (add-on)	17,000.00	62.00
30078A	4	Expand to 768kb memory	16,000.00	60.00
7970E	1	1600 bpi magnetic tape	8,885.00	70.00
7970E-426	1	Specify HP-IB controller and cable	3,115.00	23.00
30079A	1	General I/O channel	1,800.00	10.00
2608A	1	400 lpm printer	9,250.00	147.00
2608A-333	1	Specify HP-IB controller and cable	565.00	0.00
2608A-110	1	Add sound cover	150.00	0.00
31389B	1	Printer cable extension (2 meters)	65.00	0.00
2640B	2	Interactive display terminals	5,200.00	36.00
2648A	1	Graphics terminal	5,500.00	22.00
13232A	3	Terminal cables	150.00	0.00
TOTALS			\$129,180.00	\$ 839.00

HP 3000 SOFTWARE ORDERING EXAMPLE: PLAN 2 (PREPAID PLAN)

PRODUCT	INITIAL PAYMENT			PREPAID OPTION			PREPAID MONTHLY FEES		
	QTY	PRODUCT NUMBER	PRICE	QTY	PRODUCT NUMBER	PRICE	QTY	PRODUCT NUMBER	PRICE
FOS	1	Included in HP 3000		1	32412A-002*	\$2,250.00	12	22823A	\$125.00
COBOL	1	32213C	\$1,500.00	1	32213C-002	1,800.00	12	22823A-003	100.00
DBMS	1	32235B	3,000.00	1	32235B-002	2,250.00	12	22823A-008	125.00

*Use the proper HP 3000 system product number when ordering prepaid option for FOS.

Note: On all HP 3000 Series 33 or Series III Systems, software may be ordered through PLAN 2 shown above or through PLAN 1 shown on the Series III Configuration Example.

HP 3000 SERIES III

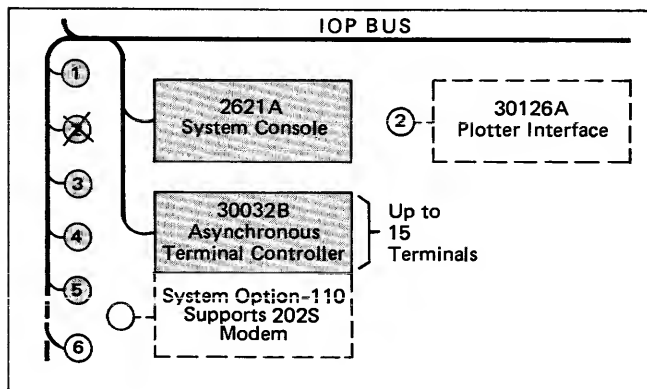
HOW TO CONFIGURE AN HP 3000 SERIES III SYSTEM
SERIES III CONFIGURATION GUIDE
SERIES III CONFIGURATION DIAGRAM
SERIES III MEMORY EXPANSION
SERIES III SYSTEM PRICING GUIDE
SERIES III CONFIGURATION EXAMPLE

HOW TO CONFIGURE AN HP 3000 SERIES III SYSTEM

To aid in configuring an HP 3000 Series III system, a diagram is included on the following page. In this diagram, equipment originally supplied with a standard model is shown in gray, while optional equipment is in white. By following in the steps indicated, it is simple to plan a new system or add to an existing one.

Selecting Options

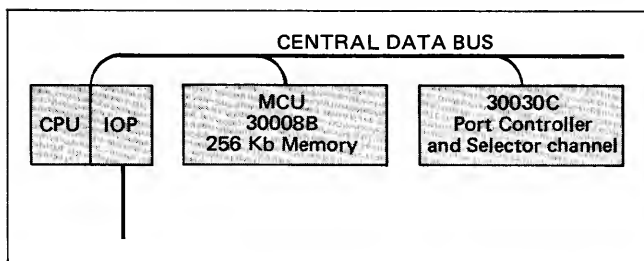
When choosing options denoted by "circles," be certain to write the number of the interface slot which the option will occupy in the open circle beside the selected option; then, cross out the numbered circle connected to the IOP Bus to show that the interface slot is no longer available. For example:



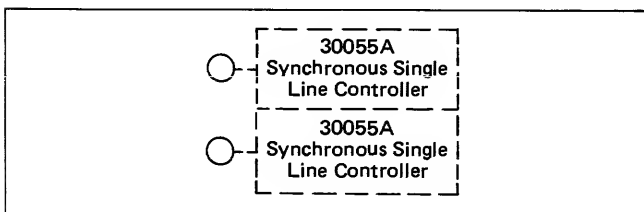
As a result, the options that have been chosen and the interface slots they occupy will be evident at a glance. **DO NOT EXCEED THE TOTAL NUMBER OF AVAILABLE INTERFACE SLOTS ON THE IOP BUS.**

Devices identified with triangles or squares will function only in the positions designated by matching geometric shapes.

Equipment Supplied (Standard Configuration). Products in "gray" outlined by "solid lines."



Optional Equipment. Products in "white" outlined by "dashed lines."



Interfacing Optional Equipment Through Interface Slots. Spare interface slots (numbered "circles" connected to the IOP Bus) are available for additional products, and can be occupied by optional equipment identified with an attached "circle."

Connecting Additional Terminals. One asynchronous terminal controller (ATC) is supplied. It permits the connection of up to 16 terminals, including the system console.

Disc Drive. One 50 Mb disc subsystem with controller is supplied, connected directly to the Central Data Bus through a selector channel. Optionally a 120 Mb disc subsystem is available. The controller can handle a total of 8 drives, 960 Mb maximum capacity.

Magnetic Tape Units. One 1600 bpi or 800 bpi magnetic tape drive in lo-boy cabinet is required and is connected through a controller to the system. The supplied controller can also handle up to three extra drives of mixed densities (up to a total of four).

Additionally, a second controller may be ordered which can also support up to four drives of mixed densities. Each additional tape drive ordered will be supplied in a free-standing lo-boy cabinet. See the 7970 data sheet for further configuration details on extra drives.

Line Printers. A maximum of four line printers may be connected to any HP 3000 Series III, each with its own 30209A controller.

Environmental Specifications

The following specifications apply to any HP 3000 configured with any combination of the peripheral devices listed. It is not necessary to consider each device separately.

Temperature (operating): 50°–95°F (10°–35°C). Recommended range: 60°–78°F (15°–25°C)

Relative humidity: 30–80% non-condensing. Maximum wet bulb temperature 78°F (26°C).

Line voltage: 200/210/220/230/240 VAC +4%, –10% single phase.

Line frequency: 50 or 60 Hz, ± 5 Hz.

Maximum rate of temperature change: 18°F/Hr. (10°C/Hr.)

HP 3000 SERIES III (32435A) CONFIGURATION GUIDE

Hardware Supplied

- Central processing unit (CPU)
- 209 firmware instructions
- System clock
- 16-port asynchronous terminal controller
- Modem support (for type 103 or equivalent)
- 16-Channel System I/O Multiplexer
- System desk
- 30030C high-speed selector channel
- 2621A CRT console
- 7920 50 Mb disc with controller
- 30215A magnetic tape controller
- Built-in isolation transformer
- 256kb fault control memory
- 9 spare I/O slots and space for 2048kb memory
- One bay, card cages, and power supplies
- Room for 47 terminals plus system console

Software Supplied

- Multiprogramming Executive III operating system (MPE III)
- HP 3000 Series Fundamental Operating Software (initial payment in system price) which includes:
- System Programming Language (SPL)
 - Text editor (EDIT)
 - File-copying utility (FCOPY)
 - Sort and merge package (SORT)
 - Compiler library

Note: A 7970E (1600 bpi) or 7970B (800 bpi) magnetic tape drive is required and must be ordered separately.

Site Preparation for Standard Series III

	HP 7920M 50 Mb DISC DRIVE		SYSTEM BAY		HP 2621A CRT CONSOLE AND DESK		7970E (MUST BE ORDERED SEPARATELY)	
	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)
VOLTAGE (single phase)	115	230	200-240	200-240	110-120	Must be ordered separately	115	230
CURRENT	8.7A*	4.4A*	24A*	24A*	0.5*		33A*	1.7A*
HEAT OUTPUT (per hour)	2080 btu	520 kcal	14,000 btu	3500 kcal	137 btu		614 btu	150 kcal
WEIGHT	240 lb	109 kg	790 lb	358 kg	130.5lb		290 lb	129 kg
SIGNAL CABLE LENGTH	**	**	—	—	25 ft		20 ft	6m

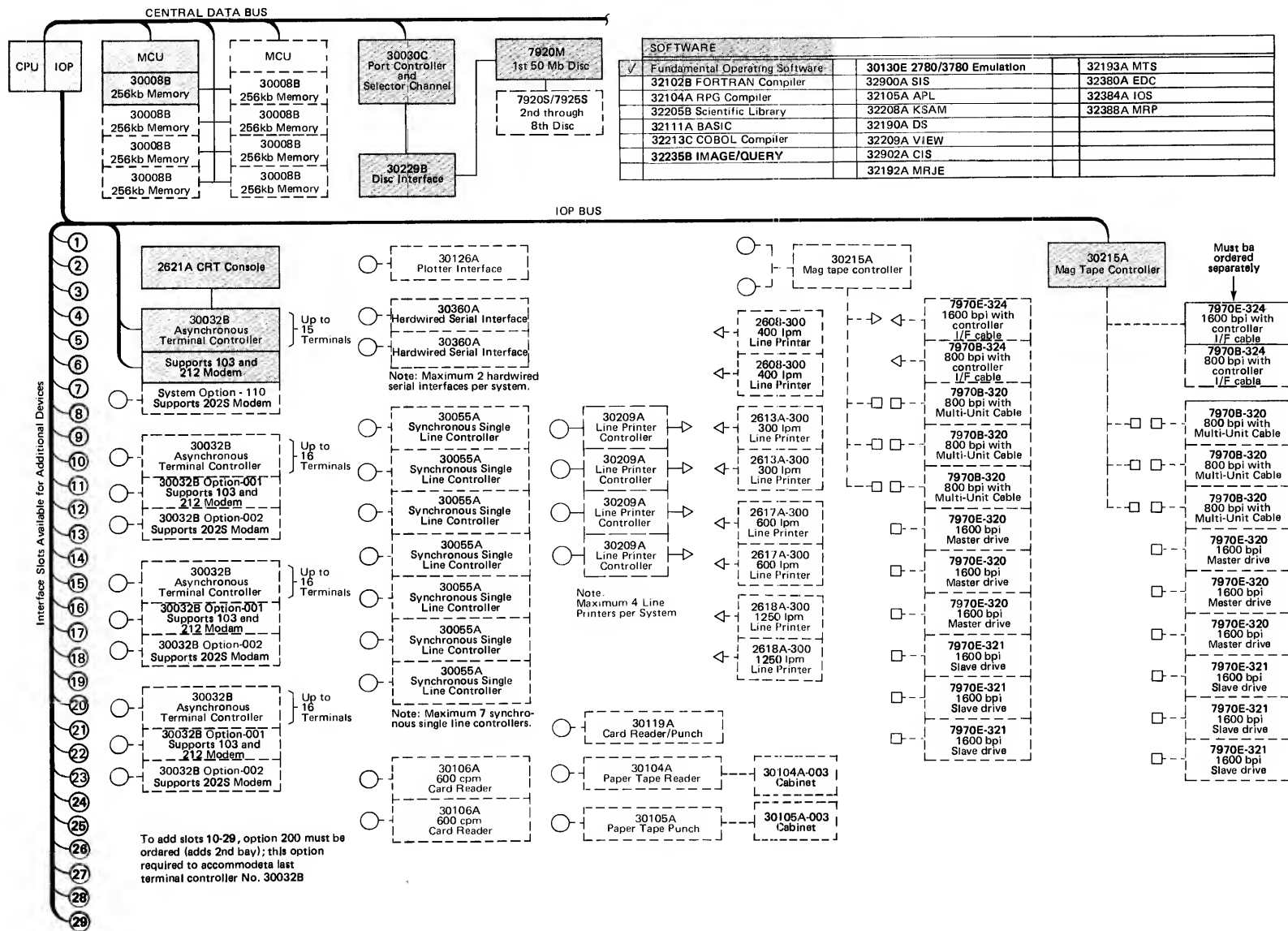
Site Preparation Data for Series III with Option 200 (I/O Expansion to Second Bay)

	HP 7920M 50 Mb DISC DRIVE		SYSTEM BAYS		HP 2621A CRT CONSOLE AND DESK		7970E (MUST BE ORDERED SEPARATELY)	
	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)	USA (60 Hz)	NON-USA (50 Hz)
VOLTAGE	115	230	200-240	200-240	115	Must be ordered separately	115	230
CURRENT	8.7A*	4.4A*	24A*	24A*	0.5*		3.3A*	1.7A*
HEAT OUTPUT (per hour)	2080 btu	520 kcal	15,000 btu	3881 kcal	137 btu		614 btu	150 kcal
WEIGHT	240 lb	109kg	1010 lb	458 kg	130.5 lb		290 lb	129 kg
SIGNAL CABLE LENGTH	**	**	—	—	25 ft		20 ft	6m

* System cabinet alone draws up to 10 amps; remaining 14 amps are available for the system disc and tape through an outlet at the rear of the cabinet.

** Up to seven slave disc drives may be daisy-chained to a master drive. The cable length between disc drives is 8 ft. (2.4m). In addition, each drive also has a cable back to the controller in the master drive. The length of this cable for each drive is 50 ft. (15.2m). The maximum cumulative length of daisy-chained cable is 74 ft. (22.5m). Longer cables may be special ordered, but this is not advised.

MAXIMUM CONFIGURATION DIAGRAM FOR SERIES III (32435A)



HP 3000 SERIES III MEMORY EXPANSION

The 30418A memory expansion upgrade permits increasing memory capacity of HP 3000 Series III systems from 1024kb to a maximum of 2048kb. The kit includes two 256kb memory boards with built-in fault control, memory controller, cables, and mounting hardware. Further expansion to the full 2048kb is accomplished by adding two more optional 256kb memory array boards.

System Prerequisites

HP 3000 Series III with memory of 1024kb. For Series II Models 5 and 7 which have been upgraded to a Series III, 30408A option 002 is required.

Configuration Environment Power

If the Series III being expanded is an upgrade from a Series II, all configuration, environmental, and power requirements re-

main unchanged from the original Series II model which was upgraded. To further expand your upgraded Series II, refer to original configuration information. Series III systems which are upgrades from some models of Series II systems must order option 001 to add a power supply. This option is also required for memory expansion of model 32421A Series III systems. Consult your Sales Representative for further details.

Warranty

The new hardware components furnished with the kit are warranted for 90 days from the date of installation. This warranty is implemented as a free service contract on new equipment only.

SERIES III SYSTEM PRICING GUIDE

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE †	MONTHLY MAINT. CHARGE†
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HP 3000 Series III System

32435A		HP 3000 Series III Computer System , 200-240V, 60 Hz, 1-phase; 256kb memory, 50 Mb Disc, 2621A console, 16 port asynchronous terminal controller, 1 system cabinet and table, capacity for 47 asynchronous terminal ports, and MPE III operating system. Initial payment for Fundamental Operating Software (SPL, EDIT, FCOPY, SORT, Compiler Library) — 48 additional monthly software fee payments required. Complete manual set. Software distributed on 1600 bpi tape. Must order 7970E or 7970B system magnetic tape drive. Specify option 324 for the first drive.	\$ 94,375.00	\$ 553.00
	002	Prepaid purchase option of Fundamental Operating Software.	2,250.00	0.00
	008	Supply software on 800 bpi NRZI tape	0.00	0.00
	015	230V, 50 Hz single-phase operation. Deletes system console; must order replacement console separately.	-1,450.00	-15.00
	110	Adds 202S type modem control to asynchronous terminal controller	+1,240.00	+6.00
	122	Delete system console. Must order replacement console separately.	-1,450.00	-15.00
	125	Replace 7920 (50 Mb disc) with 7925 (120 Mb disc)	+4,000.00	+8.00
	200	Additional I/O cabinet. Adds 20 I/O slots and capacity for an additional 16 asynchronous terminal ports (total 63)	+8,000.00	+25.00
	505	Expands memory to 512kb	+8,000.00	+38.00
	506	Expands memory to 768kb	+16,000.00	+76.00
	507	Expands memory to 1024kb	+24,000.00	+114.00
	509	Expands memory to 1536kb	+41,500.00	+208.00
	511	Expands memory to 2048kb	+57,500.00	+284.00

†Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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HP 3000 Series III I/O Expansion Products

30032B		Asynchronous Terminal Controller.	\$ 3,000.00	\$ 15.00
	001	For 103 type modems only	+1,240.00	+6.00
	002	For 103 and 202S type modems	+2,480.00	+12.00
30235A		I/O Expansion Kit for HP 3000 Series III. Adds 1 cabinet with 20 I/O slots and capacity for an additional 16 asynchronous terminal ports.	8,000.00	25.00

Field-Installed HP 3000 Series III Memory Expansion

30418A		1536kb Memory Expansion Kit. For all HP 3000 Series III's. Expands system memory from 1024kb to 1536kb. See notes below for prerequisites. To expand to the full 2048kb also order two 30008B 256kb memory array boards.	\$17,500.00	\$ 94.00
	001	Adds one 30311A power supply. Required for all model 32421A Series III's. Also required for any Series III upgraded from a Series II which had only one 30311A power supply. Prerequisites: You must have a Series III with 1024kb of memory purchased as either a new system option or as an upgrade with a 30417A Series II upgrade kit. If your HP 3000 Series III was upgraded from an HP 3000 Series II Model 5 or 7 and you wish to expand to 1536kb or memory or greater, you must order a 30408A-002 I/O expansion kit as a prerequisite to ordering the 30418A Series III memory expansion kit.	2,500.00	29.00
30008B		256kb Memory Array. Note: Only 256kb, 512kb, 768kb, 1024kb, 1536kb, and 2048kb memory sizes are supported. When ordering additional memory (30008B) make sure that the total system memory is equal to one of the supported sizes.	8,000.00	38.00

Disc Memories and Controllers

7920M		50Mb Master Disc Drive. Includes 7920 drive in cabinet, 13394A pack, disc controller, and cables.	\$17,000.00	\$ 81.00
	015	230V, 50 Hz, single-phase operation.	0.00	0.00
7920S		Add-on 50 Mb Disc Drive. Includes 7920 drive in cabinet, 13394A pack, and cables.	13,000.00	54.00
	001	Specify this option for first 7920 in system. Substitutes 18 ft. multi-unit and 25 ft. data cable for standard 8 ft. and 50 ft. cables.	0.00	0.00
	015	230V, 50 Hz, single phase operation	0.00	0.00
7925M		120 Mb Master Disc Drive. Includes 7925 drive in cabinet, 13345A pack, disc controller, and cables.	21,000.00	89.00
	015	230V, 50 Hz, single phase operation.	0.00	0.00

continued

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Disc Memories and Controllers (continued)

7925S		120 Mb Add-on Disc Drive. Includes 7925 drive in cabinet, 13356A pack, and cables.	\$17,000.00	\$ 62.00
	001	Specify this option for first 7925 disc in system. Substitutes 18 ft. multi-unit and 25 ft. data cable for standard 8 ft. and 50 ft. cables.	0.00	0.00
	015	230V, 50 Hz, single phase operation	0.00	0.00
	250	Field installed 30229A Controller upgrade for 7925 disc support. Required for all 30229A Controllers shipped prior to June 1978 (approximate). Upgrades device controller board from 13037-60002 to 13037-60028 and the error correction board from 13037-60004 to 13037-60024.	500.00	0.00
13394A		7920 Disc Pack	600.00	0.00
13356A		7925 Disc Pack	850.00	0.00

Magnetic Tape Drives and Controllers

30215A		Mag Tape Controller. Interfaces up to four 7970B or 7970E mag tapes with 300 level options to an HP 3000 Series III.	\$ 2,700.00	\$ 15.00
7970B		800 bpi 45 ips Mag Tape. Must order option 320 or 324 to interface drive to an HP 3000 Series III. 50/60 Hz, 115/230V switch.	6,870.00	64.00
	320	Specify this option for add-on drives (2nd, 3rd, and 4th drive) on 30215A controller. Includes HP 3000 low-boy cabinet and 20 ft. multi-unit cable.	1,830.00	2.00
	324	Specify this option for first drive on a 30215A mag tape controller. Includes HP 3000 low-boy cabinet and HP 3000 interface cable.	1,830.00	2.00
7970E		1600 bpi, 45 ips Mag Tape. Must order option 320, 321, or 324 to interface drive to an HP 3000 Series III. 50/60 Hz, 115/230V switch.	8,885.00	70.00
	320	Specify this option for 2nd, 3rd, and 4th master drive on 30215A controller. Includes HP 3000 low-boy cabinet and multi-unit cable.	1,740.00	2.00
	321	Specify this option for 2nd, 3rd, and 4th slave drive on 30215A controller. Includes HP 3000 low-boy cabinet and slave multi-unit cable. Must be used with a master unit.	-105.00	2.00
	324	Specify this option for first drive on a 30215A controller. Includes HP 3000 low-boy cabinet and HP 3000 interface cable.	1,740.00	2.00
		<i>Notes:</i> <i>One drive must be a master.</i> <i>Master/slave electronic relationship: Two masters on the same controller offer greater redundancy than a master and a slave. With the master/slave relationship, the slave shares the master's electronics; the slave will not function if the master is not operative. With a master/master relationship, if the first master is not operative it does not affect the second master's performance.</i> <i>For add-on tape drive to Series I, Series II, and Series III model 32421A systems, consult the Price/configuration Guide for these products.</i>		

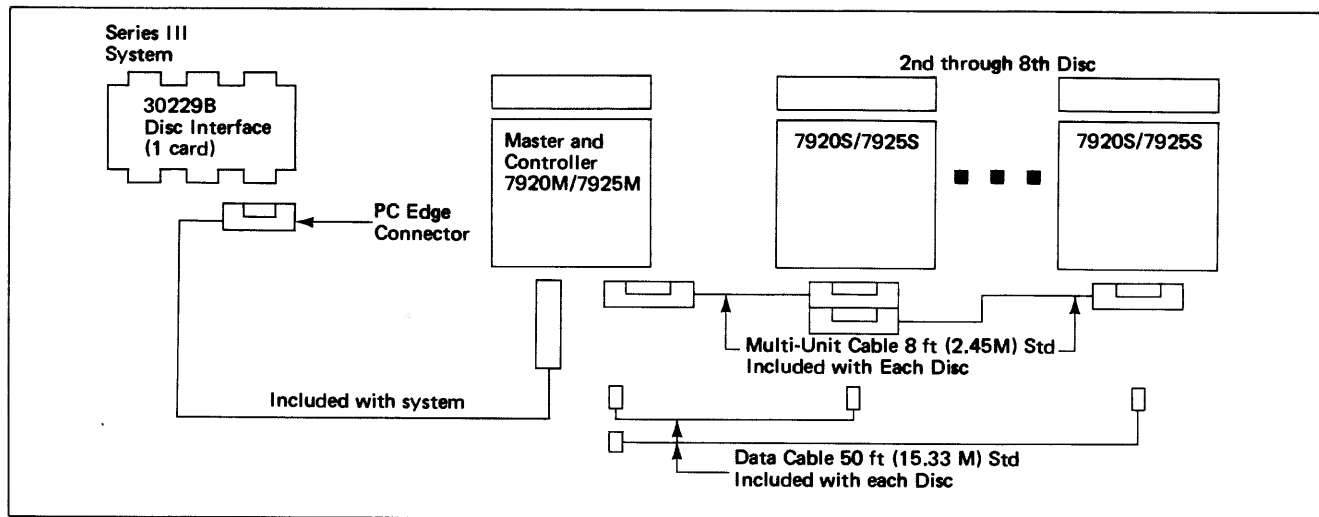
PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Line Printers and Controllers

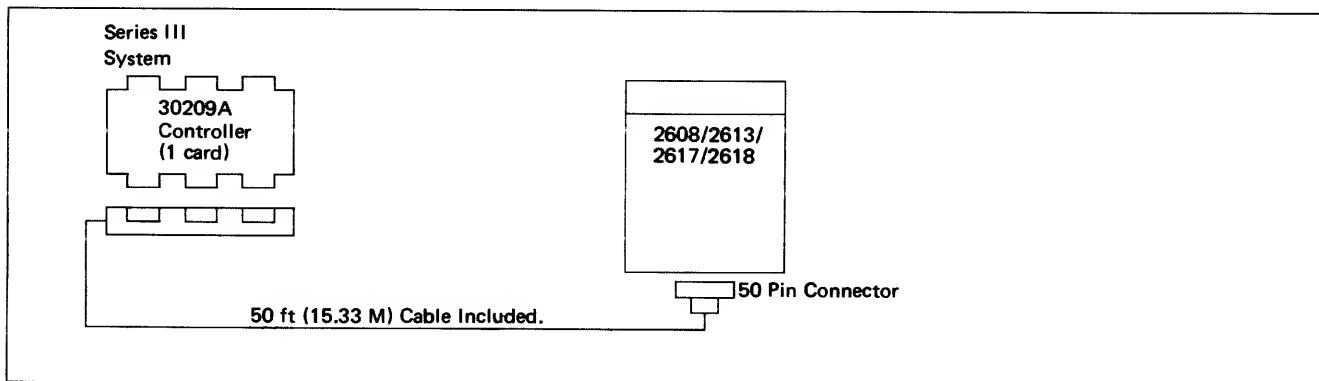
30209A		Line Printer Controller. Interfaces one 2608A, 2613A, 2617A or 2618A printer with option 300 to an HP 3000 Series III.	\$ 1,275.00	\$ 7.00
2608A		400 lpm Dot Matrix Line Printer. Must order option 300. 128 character USASCII set. Includes enclosed stand with casters, paper basket. Monthly maintenance charge allows three levels of monthly usage. Level 1: 1-69 print hours Level 2: 70-130 print hours Level 3: 131-360 print hours	9,250.00	62.00 71.00 125.00
	015	230V, 50 Hz	0.00	0.00
	110	Sound cover	150.00	0.00
	300	Adds HP 3000 Series II and III interface cable, documentation, and installation.	650.00	0.00
2613A		300 lpm Line Printer. With 136 columns, 64 characters; 115V, 60 Hz	10,825.00	133.00
	001	96 character set	1,675.00	0.00
	002	64-character set with OCR-B font. Slug character replaces backslash	0.00	0.00
	003	96 character set with OCR-B font as above	1,675.00	0.00
	015	230V, 50 Hz, single-phase operation	0.00	0.00
	016	96 character set and 230V, 50 Hz operation	1,675.00	0.00
	300	Add HP 3000 interface cable, documentation, and installation	450.00	0.00
2617A		600 lpm Line Printer. With 136 columns, 64 characters, 115V, 60 Hz	15,700.00	147.00
	001	96 character set	1,675.00	0.00
	002	64 character set with OCR-B font. Slug character replaces backslash	0.00	0.00
	003	96 character set with OCR-B font as above	1,675.00	0.00
	015	230V, 50 Hz, single-phase operation	0.00	0.00
	300	Adds HP 3000 interface cable, documentation, and installation	450.00	0.00
2618A		1250 lpm Line Printer. With 132 columns, 64 characters; 115V, 60 Hz	35,400.00	150.00
	001	96 character set	1,900.00	0.00
	002	64 character set with OCR-B font. Slug character replaces backslash	0.00	0.00
	003	96 character set with OCR-B font as above	1,900.00	0.00
	015	230V, 50 Hz, single-phase operation	0.00	0.00
	300	Adds HP 3000 interface cable, documentation, and installation	450.00	0.00

SERIES III PERIPHERAL CABLES

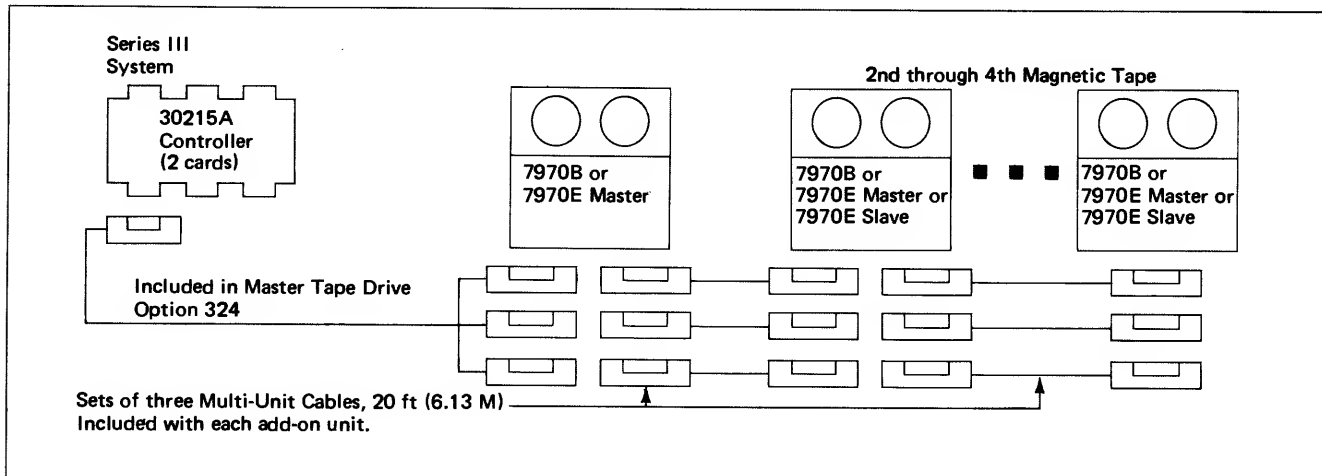
Discs



Printers



Magnetic Tapes



PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Card I/O, Paper Tape I/O and Plotter Interface

30106A		80-Column Card Reader and Controller. 600 cpm; 115V, 60 Hz. Includes HP 2893A card reader, controller/interface, device diagnostic software, and 2893A card reader manual No. 30106-90001.	\$ 7,700.00	\$ 57.00
	015	230V, 50 Hz single-phase operation.	0.00	0.00
30119A		80-Column Card Reader/Punch and Controller. Reads 176-200 cpm, punches 45-75 cpm; 115V, 60 Hz. Includes card reader/punch, 30219A universal interface package consisting of interface card and cable, device diagnostic software.	17,500.00	137.00
	015	230V, 50 Hz single-phase operation.	0.00	0.00
30104A		Paper Tape Reader and Controller. Reads 500 cps at 60 Hz, 420 cps at 50 Hz. Includes tape reader, rack mounting kit, controller/interface, device diagnostic software, and manual (30104-90001).	3,585.00	26.00
	003	Add low-profile cabinet. 115V, 60 Hz	2,000.00	0.00
	004	Add low-profile cabinet. 230V, 50 Hz. Requires option 015.	2,000.00	0.00
	015	230V, 50 Hz operation.	0.00	0.00
		Operating Accessory Available: 12575C Paper Tape Winder, 115V, 60 Hz/battery. Includes rechargeable battery.	150.00	
30105A		Paper Tape Punch and Controller. Punches 75 cps. Includes tape punch, controller/interface, device diagnostic software, and manual (30105-90001). 50/60 Hz switch-selectable.	5,000.00	54.00
	003	Add low-profile cabinet. 115V, 60 Hz.	2,000.00	0.00
	004	Add low-profile cabinet. 230V, 50 Hz.	2,000.00	0.00
		<i>Note:</i> <i>The paper tape reader and paper tape punch subsystems together require 17 vertical inches of cabinet space. One subsystem or both may be installed below the magnetic tape drive on a three-bay system, if no other equipment occupies that space. Option 003 or 004 must be ordered to provide a cabinet for one or both subsystems if this space is not available. Option 003 or 004 must be ordered with Series III model 32435A.</i>		
30126A		CalComp 565 Series Plotter Interface	1,350.00	14.00
	001	CalComp 702 series plotter interface	0.00	0.00

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Interactive Display Terminals

2621A		Interactive Terminal. 115V, 60 Hz	\$ 1,450.00	\$ 15.00
	013	240V, 50 Hz operation	0.00	0.00
	014	100V, 60 Hz operation	0.00	0.00
	015	220V, 50 Hz operation	0.00	0.00
	016	100V, 50 Hz operation	0.00	0.00
2621P		Interactive Terminal with Printer. 115V, 60 Hz	2,550.00	25.00
	015	230V, 50 Hz operation	0.00	0.00
	016	115V, 50 Hz operation	0.00	0.00
2640B		Display Terminal	2,600.00	18.00
	015	230V, 50 Hz operation	0.00	0.00
	016	115V, 50 Hz operation	0.00	0.00
2645A		Display Station	3,500.00	20.00
2641A		APL Display Station	4,100.00	20.00
2647A		Intelligent Graphics Terminal	8,300.00	50.00
2648A		Graphics Terminal	5,500.00	22.00
		The following options apply to 2645A, 2641A, 2647A, and 2648A except as noted.		
	001	128 character set adds lower case and displayable control codes. For 2641A only.	100.00	0.00
	007	Integrated dual cartridge tapes (standard on 2647A)	1,600.00	6.00
	013	5 mini-cartridges	90.00	0.00
	015	230V, 50 Hz	0.00	0.00
	016	115V, 50 Hz	0.00	0.00
	030	Delete standard asynchronous communications interface for multipoint applications. Order 13260 product to support multipoint communications.	-160.00	0.00
	031	Delete standard asynchronous communications interface to free one option slot. (For 2647 only)	-75.00	0.00
		<i>Note:</i> <i>Cable is not included with display terminals. Order separately as described in Point-to-Point Cable Configuration diagrams.</i>		
		Terminal Expansion for 264x Display Terminals		
13234A		Terminal 4K Memory Module	300.00	0.00
13231A		Display Enhancements —blinking, half bright, underline, and 64 character line drawing	250.00	0.00
	201	Add Math Symbols Alternate Character Set	100.00	0.00
	203	Add Large Character Alternate Character Set	150.00	0.00
13240A		Option Slot Extender. Adds 5 slots for 2640 Terminals only	150.00	0.00
		<i>Note:</i> <i>See Terminal Option Summary Chart for complete details.</i>		

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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Printing Terminal

2635A		Printing Terminal. 180 characters per second. Automatic bidirectional printing, underline and display function modes. 8 channel fixed VFU (non-programmable). EIA RS232C interface without modem control. (For use with 103-type modems or some hardwired applications.) 115 volts, 60 Hz. Includes terminal and 12.5 ft male-to-male cable.	\$ 3,450.00	\$ 31.00
	015	230V, 50 Hz	0.00	0.00
	715	Add service documentation	15.00	0.00
		Additional Products:		
26097A		Stand for 2635A	275.00	0.00
	001	Add Casters	15.00	0.00
	002	Add paper catcher	50.00	0.00

Terminal Cables (2620 Series)

13222C		RS232 Cable. Female, 2 meters (6.5 feet).	\$ 50.00	0.00
13222M		European Modem Cable. Male, 5 meters (16 feet).	75.00	0.00
13222N		U.S. Modem Cable. Male, 5 meters (16 feet).	75.00	0.00

Terminal Cables (2640 Series)

30062B		Data Set Cable. Connects HP 3000 Asynchronous RS-232 port to a Bell 103 or 202S type modem; 25 feet (7.6m) long with male-to-male RS-232C connectors.	\$ 65.00	\$ 0.00
	001	Replace 25 foot (7.6m) cable with 50 foot (15.2m) cable	+30.00	0.00
30062C		Modem Extender Cable. Multipurpose extension, 24 feet (7.6m) long with male-to-female RS 232C connectors. All 25 pins connected end to end.	105.00	0.00
	001	Replaces 25 foot (7.6m) cable with 50 foot (15.2m) cable	+40.00	0.00
	002	Replaces 25 foot (7.6m) cable with 100 foot (30.4m) cable	+95.00	0.00
30062D		Terminal Extender Cable. Hardwired applications only; 25 feet (7.6m) long with male-to-female RS-232C connectors; three wires (send, receive, common) connected.	65.00	0.00
13232N		Terminal Cable. (name on hood: 103/102 modem cable); connects 2640 series terminals to 103 or 202 type modem or to HP 3000 System; 15 feet (4.6m) long with male-to-PC edge connector connectors. Shielded.	75.00	0.00
13232A		Terminal Cable. Same as 13232N, but not shielded.	50.00	0.00
13232M		European Modem Cable. For connection of 2640 series terminals to European modems; 15 ft. (4.6m) long with male-to-PC edge connector connectors.	75.00	0.00

INTERACTIVE DISPLAY TERMINAL OPTION SUMMARY CHART

	2640B	2641A	2645A	2647A	2648A	2621 A/P
Maximum Baud Rate (see Note 1)	2400	9600	9600	9600	9600	9600
Memory	5-8 kb	4-12 kb	4-12 kb	9 kb max.	8-12 kb	48 lines
Block or character mode (see Note 2)	STD	STD	STD	STD	STD	Char mode only
Inverse Video	STD	STD	STD	STD	STD	N/A
Underline, Half-bright, blinking (Available by ordering 13231A)	AVAIL	STD	AVAIL	AVAIL	AVAIL	Underline only
User-definable Soft Keys	N/A	8 STD	8 STD	8 STD	9 STD	N/A
Option slots supplied	2	5	7	1	4	none
Character set supplied (see Note 4)	128 Roman	64 Roman + 128 APL	128 Roman	128 Roman	128 Roman	128 Roman
Other (see Note 3)				Graphics & Intelligence	Graphics Features	120 cps thermal printer on 2621P
Lower case/displayable control codes (see Note 4)	STD	128 Roman	STD	STD	STD	STD
Integrated dual cartridge tapes	N/A	OPT	OPT	STD	OPT	N/A
5 mini-cartridges	N/A	OPT	OPT	OPT	OPT	N/A
230V, 50 Hz operation	OPT	OPT	OPT	OPT	OPT	(See Note 5)
115V, 50 Hz operation	OPT	OPT	OPT	OPT	OPT	OPT
Delete standard asynchronous communications interface	N/A	OPT	OPT	OPT	OPT	N/A
Add math symbols alternate character set	AVAIL	OPT	AVAIL	AVAIL	AVAIL	N/A
Add large character alternate character set (Alternate characters sets available by ordering 13231A)	AVAIL	OPT	AVAIL	AVAIL	AVAIL	N/A

KEY:

STD—Standard with terminal, OPT—Option ordered with terminal, AVAIL—Order separate product, N/A—Not Available.

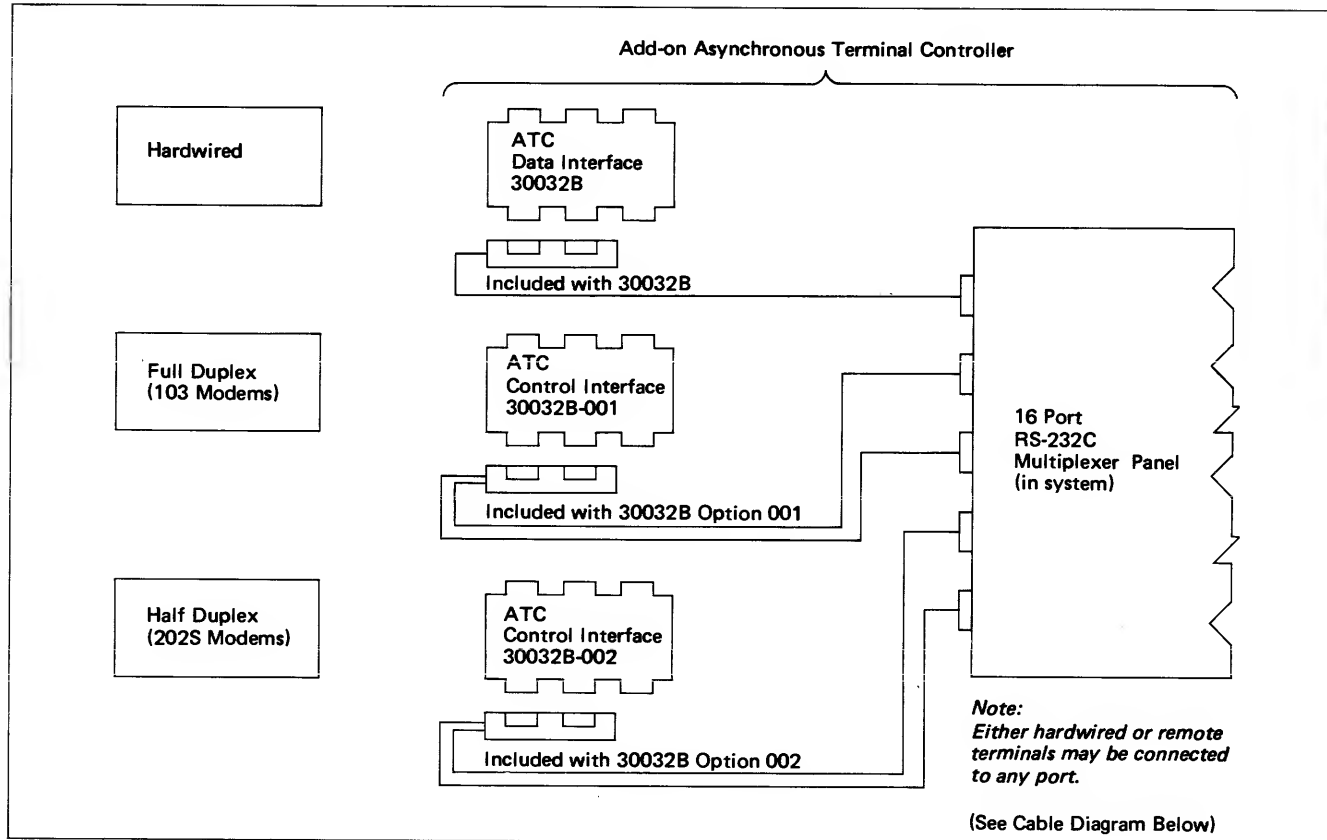
NOTES:

1. The maximum data rate is 2400 baud for 264x and 262x series terminals on HP 3000 Series III systems. HP 2645 series terminals equipped with Multidrop hardware connected to the Synchronous Single Line Controller (SSLC) on HP 3000 Series III systems can operate at 9600 baud.
2. Terminals on the HP 3000 normally operate in character mode, except when accessed via MFG/3000, VIEW/3000, or MTS/3000 where block mode is employed. Terminals without block mode cannot run MFG/3000, VIEW/3000, or MTS/3000.
3. The 2647A and 2648A are supported on the HP 3000 as a 2645A. Development of software to make full use of graphics features and intelligent terminal capabilities on the HP 3000 is the responsibility of the user.
4. Non-standard characters in the International character sets and the display enhancement control characters must be handled by user application programs.
5. Voltages available at 50 Hz are:

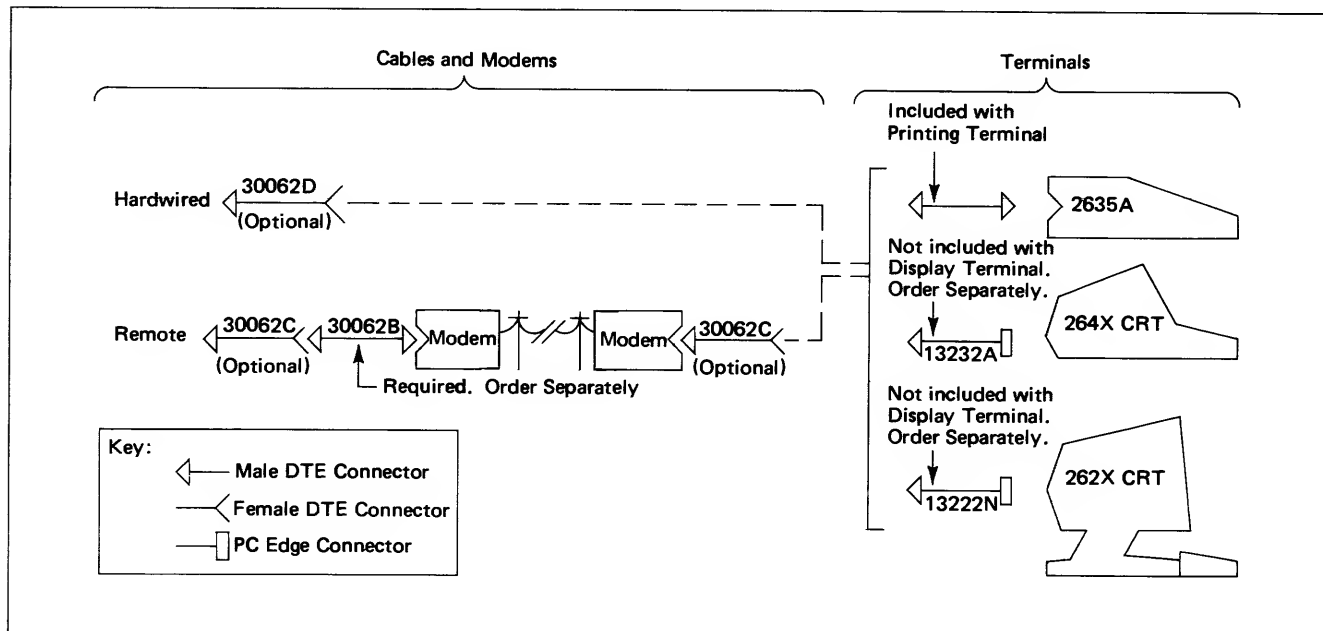
2621A 220/240V
2621P 230V

POINT-TO-POINT CABLE CONFIGURATIONS

Series III



Common Cabling Requirements

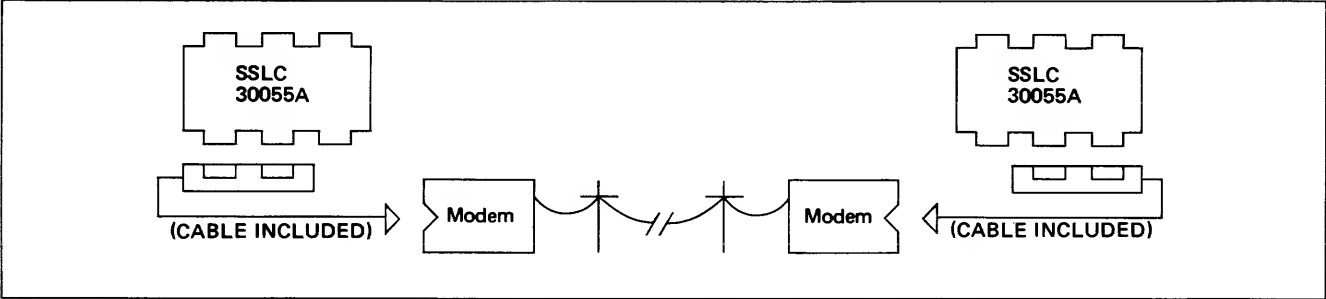


PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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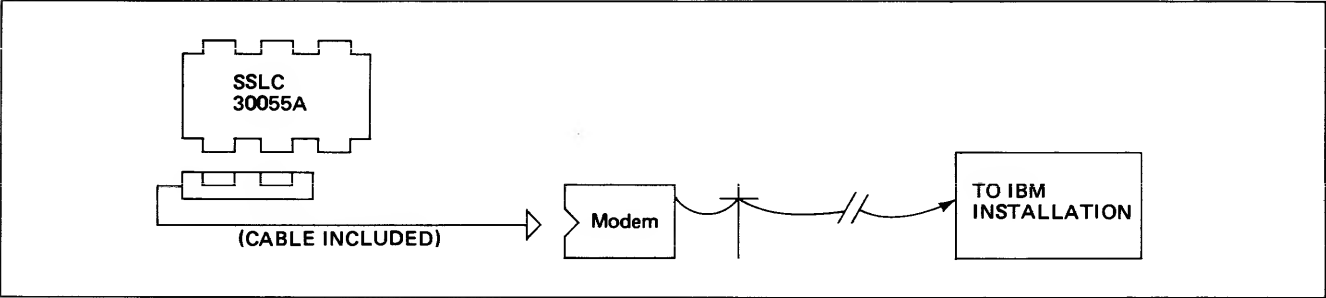
Distributed Systems/Communications Products

30055A		Synchronous Single Line Controller. For modem links. Cable to modem included.	\$ 2,000.00	\$ 18.00
	001	Replaces modem cable with cable to run MTS/3000 in hardwired asynchronous mode.	0.00	0.00
30360A		Hardwired Serial Interface. For coaxial links. A 30220A cable is required for each pair of hardwired serial interfaces.	2,300.00	20.00
30220A		Coaxial Cable. For hardwired serial interface. 25 ft. long.	175.00	0.00
	001	100 ft. cable	+100.00	0.00
	002	250 ft. cable	+225.00	0.00
	003	500 ft. cable	+430.00	0.00
	004	1000 ft. cable	+825.00	0.00
	005	2000 ft. cable	+1,600.00	0.00
		<i>Note:</i> <i>The DS/3000 modem link is implemented on the HP 3000 Series III with a Synchronous Single Line Controller (30055A).</i> <i>The DS/3000 hardwired coaxial link is implemented on the Series III with the Hardwired Serial Interface (30360A) and coaxial cabling (30220A).</i> <i>MTS/3000, MRJE/3000 and RJE/3000 require the Synchronous Single Line Controller (30055A).</i>		

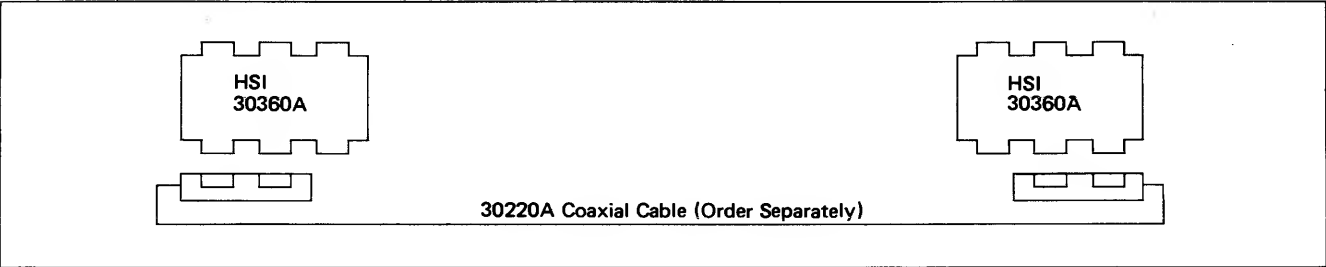
DS/3000 Modem Link



MRJE/3000—RJE/3000



DS/3000 Hardwired Link



PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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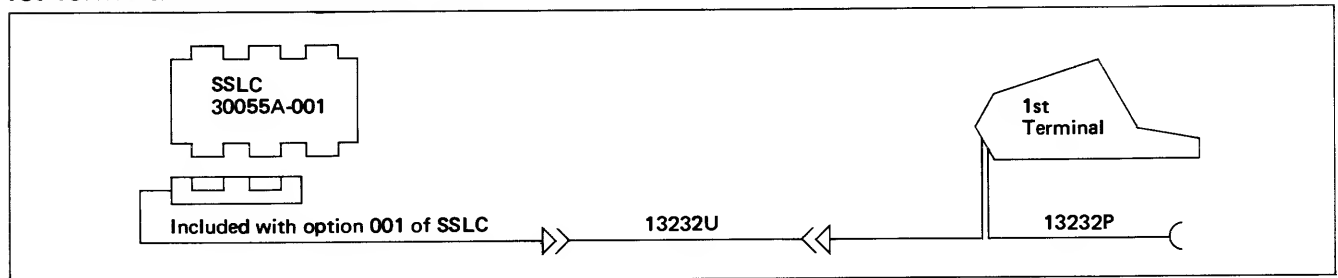
Multipoint Terminal System/Communications Products

		<p>To configure a multipoint line for your HP 3000, choose components from the following six areas:</p> <ol style="list-style-type: none"> 1. MTS/3000 software (needed only once on the system, even if multiple lines are supported). 2. 30055A Synchronous Single Line Controller with appropriate cable (one required for each line) (maximum of seven 30055A's per system). 3. One or more Asynchronous Repeaters as required. 4. Appropriate 2641A, 2645A, 2647A, or 2648A Terminals (see Terminal Pricing Section). 5. Multipoint communications interfaces for the above terminals. 6. Appropriate cables from the cable diagrams below. <p>Refer to the MTS/3000 Site Prep Manual (32193-90001) for further configuration details.</p> <p>System Software and Hardware Interface</p>		
32193A		MTS/3000 Software	Refer to Software Pricing Section for ordering information	
30055A		Synchronous Single Line Controller (SSLC). Includes 30055-60008 Synchronous Cable. Length 25 feet (7.63m).	\$ 2,000.00	\$ 18.00
	001	Replaces standard synchronous (30055-60008) cable with asynchronous (30055-60010) cable for hardwired asynchronous operation. Length 35 feet (7.63m)	0.00	0.00
30037A		Asynchronous Repeater (AR). Includes adapter cable (30037-60003).	700.00	5.00
	015	230V operation	0.00	0.00
		Terminal Multipoint Interfaces for 2645A or 2641A Terminals only		
13260C		Asynchronous Multipoint Communications Interface. For daisy chained line sharing. Not for 2640A/B or 2644A or 2621A/P terminals. Option 030 must be ordered with each terminal to delete the standard asynchronous interface.	435.00	0.00
	001	Add monitor mode capability. Allows any terminal in a drop to monitor all data transmitted to and from all terminals beyond it in the drop.	50.00	0.00
13260D		Synchronous Multipoint Communications Interface. For daisy chained line sharing. Not for 2640A/B or 2644A or 2621A/P terminals. Option 030 must be ordered with each terminal to delete the standard asynchronous interface.	450.00	0.00
	001	Add monitor mode capability. Allows any terminal in a drop to monitor all data transmitted to and from all terminals beyond it in the drop.	50.00	0.00
		Cables — See diagrams next page		
13232N		Asynchronous Repeater Terminal Cable. 15 feet (4.57m)	75.00	0.00
13232P		Modem Multipoint Cable. Each leg 15 feet (4.57m).	115.00	0.00
13232Q		Multipoint Cable. Each leg 15 feet (4.57m).	90.00	0.00
13232R		Multipoint Extension Cable	75.00	0.00
13232T		Power Protect Multipoint Cable. Each leg 15 feet (4.57m).	185.00	0.00
13232U		Modem Bypass Cable. 5 feet (1.52m).	50.00	0.00

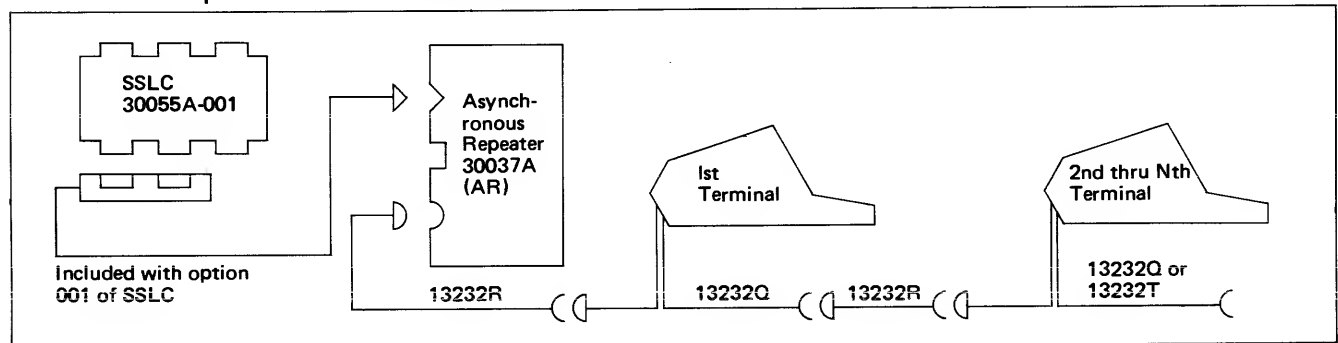
HP3000 SERIES III

MTS/3000 ASYNCHRONOUS CABLE CONFIGURATIONS—HARDWIRED

1st Terminal Within 45 Feet of CPU



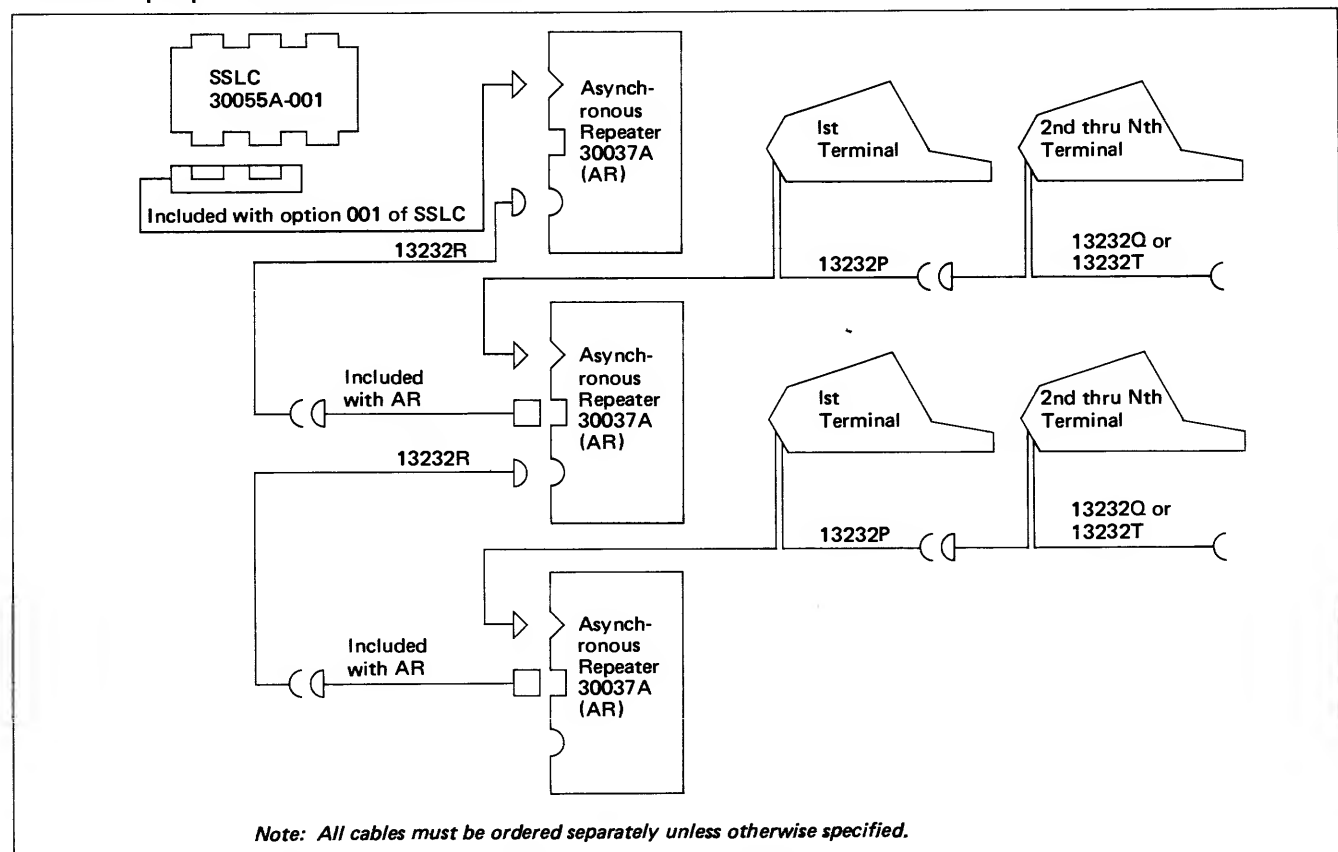
1st Terminal up to 2000 Feet from CPU



Two Groups of Terminals

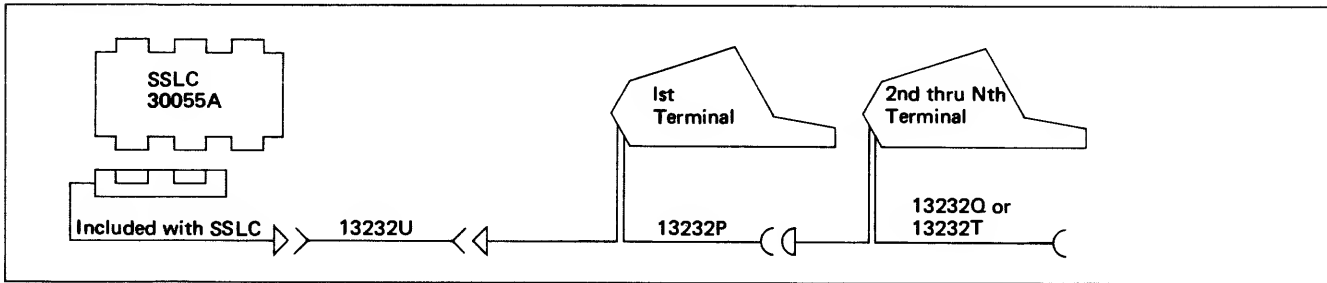
1st Group up to 2000 Feet from CPU

2nd Group up to 4000 Feet from CPU

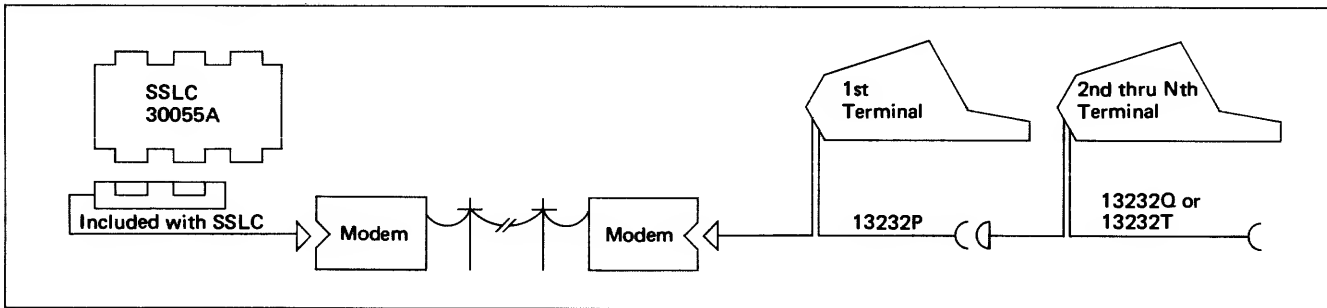


HP3000 SERIES III MTS/3000 SYNCHRONOUS CABLE CONFIGURATIONS

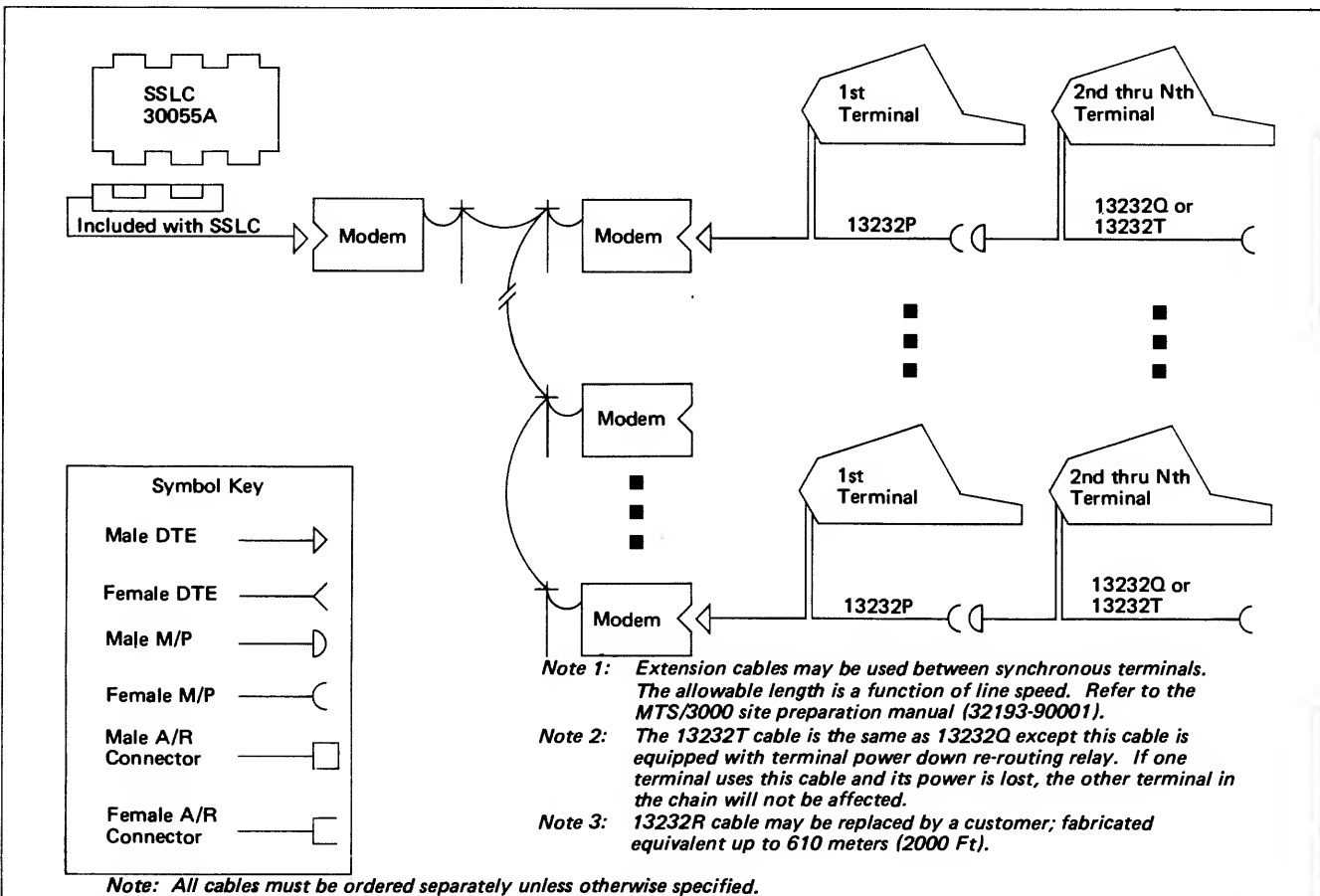
Hardwired



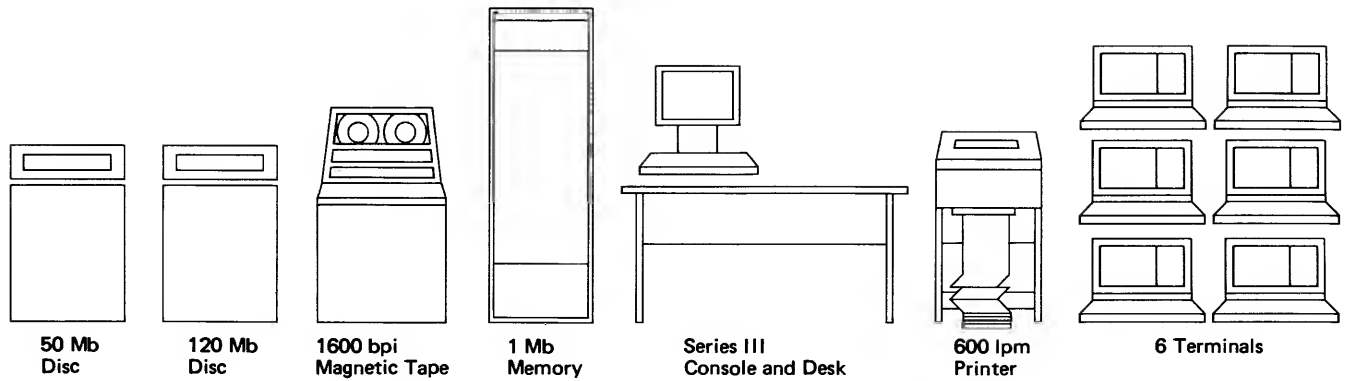
Single Remote Drop



Multiple Remote Drops



SERIES III CONFIGURATION EXAMPLE



PRODUCT NUMBER	UNITS	PRODUCT	PRICE	MONTHLY MAINT. CHARGE
32435A	1	Series III	\$ 94,375.00	\$ 553.00
32435A-507	1	Expand to 1 Mb memory	24,000.00	114.00
7925S	1	120 Mb disc	17,000.00	62.00
7970E	1	1600 bpi magnetic tape	8,885.00	70.00
7970E-324	1	Specify first master drive	1,740.00	2.00
2617A	1	600 lpm printer	15,700.00	147.00
2617A-300	1	Specify HP 3000 I/F cable	450.00	0.00
30209A	1	Line printer controller	1,275.00	7.00
2640B	3	Interactive display terminals	7,800.00	54.00
2645A	2	Interactive display stations	7,000.00	44.00
2647A	1	Intelligent Graphics terminal	8,300.00	50.00
13232A	6	Terminal cables	300.00	0.00
TOTALS			\$186,825.00	\$1,103.00

HP 3000 SOFTWARE ORDERING EXAMPLE: PLAN 1 (48 MONTHLY PAYMENTS)

PRODUCT	QTY	INITIAL PAYMENT		QTY	MONTHLY FEES	
		PRODUCT NUMBER	PRICE		PRODUCT NUMBER	PRICE
FOS	1	Included in HP 3000		48	22823A	\$125.00
COBOL	1	32213C	\$1,500.00	48	22823A-003	100.00
DBMS	1	32235B	3,000.00	48	22823A-008	125.00

Note: On all HP 3000 Series 33 or Series III Systems, software may be ordered through PLAN 1 shown above or through PLAN 2 shown on the Series 33 Configuration example.

HP 3000 SERVICES AND DOCUMENTATION

TRAINING AND CONSULTING
HP 3000 MANUALS
PERIPHERALS SITE PREPARATION DATA

PRODUCT NUMBER	DESCRIPTION	PRICE†
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Training and Consulting

22801A	HP 3000 — A Comprehensive Introduction. Five-day course given at an HP Technical Center. Tuition per student.	\$ 500.00
22815A	HP 3000 — A Comprehensive Introduction. Five-day course given on site.	4,500.00
22802B	HP 3000 System Management and Operation. Five-day course given at an HP Technical Center. Tuition per student.	500.00
22816A	HP 3000 System Management and Operation. Five-day on-site course.	4,000.00
22956A	HP 3000 IMAGE (Data Base Management). Five-day course given at an HP Technical Center. Tuition per student.	500.00
22827A	HP 3000 IMAGE (Data Base Management). Five-day on-site course.	4,500.00
22805A	HP 3000 MPE III Special Capabilities. Five-day course given at an HP Technical Center. Tuition per student.	500.00
22804A	HP 3000 SPL File System Introduction. Five-day course given at an HP Technical Center. Tuition per student.	500.00
22817B	IBM System/3-to-HP 3000 Conversion. A three-day on-site course.	3,000.00
22817T	IBM System/3-to-HP 3000 Conversion. A three-day course given at an HP Technical Center. Tuition per student.	300.00
22818A	HP 3000CX or Series I-to-MPE III Based Conversion. A one-day on-site course.	575.00
22830A	HP 3000 VIEW/3000. Two-day on-site course.	1,800.00
22831A	HP 3000 VIEW/3000. Two-day course given at an HP Technical Center. Tuition per student.	200.00
22828A	KSAM (Keyed Sequential Access Method). A two-day on-site course.	1,150.00
36900E	Distributed Systems/3000. A three-day on-site course.	3,000.00
22825A	HP 3000 Software Consulting. A consultation service to help in applying HP software to your specific applications problems. Cost per day.	500.00
32381A	EDC/3000 Project Implementation Consulting. Three one-day sessions conducted by a Manufacturing Industry Specialist. On-site.	1,500.00
32385A	IOS/3000 Project Implementation Consulting. Three one-day sessions conducted by a Manufacturing Industry Specialist. On-site.	1,500.00
32389A	MRP/3000 Project Implementation Consulting. Three one-day sessions conducted by a Manufacturing Industry Specialist. On-site.	1,500.00
32383A	EDC/3000 Administrator and User Training. Two days of classroom training. Tuition per student.	200.00
32387A	IOS/3000 Administrator and User Training. Three days of classroom training. Tuition per student.	300.00
32391A	MRP/3000 Administrator and User Training. Two days of classroom training. Tuition per student.	200.00
22705A	Manufacturing Industry Consulting. One day performed by Manufacturing Industry Specialist.	500.00
<p><i>Note:</i></p> <p><i>Fee for on-site classes includes up to 10 students. Additional students (up to the maximum permissible) can be accommodated at a charge of \$50.00/student.</i></p> <p><i>Hewlett-Packard reserves the right to cancel any class upon three-weeks notice.</i></p>		

† Domestic U.S.A. prices only, and subject to change without notice. For a firm quotation, contact your Hewlett-Packard Sales Representative.

PRODUCT NUMBER	OPT.	DESCRIPTION	PRICE	MONTHLY MAINT. CHARGE
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HP 3000 Manuals

30381A		HP 3000 Series 33 and Series III User Manual Set. <i>Note: This product provides manuals shipped in advance of the system.</i>	\$ 175.00	\$ 0.00
	333	Substitute Series 33 Console Operator's Guide for Series III Console Operator's Guide.	0.00	0.00
	600	Add BASIC/3000 Compiler and Interpreter manuals	+25.00	0.00
	601	Add FORTRAN/3000 Reference Manual and Scientific Library Reference Manual	+15.00	0.00
	602	Add: IMAGE/3000 Reference Manual QUERY/3000 Reference Manual COBOL/3000 Reference Manual RPG Reference Manual RPG Listing Analyzer VIEW/3000 Reference Manual KSAM Reference Manual	+55.00	0.00
	699	Deletes binders	-25.00	0.00
32379A		MFG/3000 Manual Set. Includes the following manuals: EDC/3000 User's Reference Manual EDC/3000 Administrator's Reference Manual IOS/3000 User's Reference Manual IOS/3000 Administrator's Reference Manual MRP/3000 User's and Administrator's Reference Manual <i>Note: See following diagram for a complete list of manuals and part numbers which may be ordered individually.</i>	80.00	0.00

HP 3000 Manuals

Overview	Guide to a Successful Installation 30000-90135 \$3.25	General Information Manual 30000-90008 \$5.00				
	Using the HP 3000 03000-90121 \$8.25	Using files 30000-90102 \$4.50				
HP 3000 Series II/III Hardware	Site Prep Manual 30000-90082 \$6.00	Site Planning Workbook 30000-90086 \$9.00	System Reference Manual 30000-90020 \$8.25	Machine Instruction Set 30000-90022 \$5.50	Instruction Decoding PG 30000-90057 \$1.55	
HP 3000 Series 33 Hardware	Site Prep Manual 30070-90007 \$4.00	Instruction Decoding PG 30070-90026 \$2.75				
MPE	Software Pocket Guide 30000-90049 \$5.25	System Manager/ System Supervisor 30000-90014 \$9.00	Series II/III Console Operator's Guide 30000-90013 \$13.50	MPE Commands 30000-90009 \$13.50	MPE intrinsics 30000-90010 \$14.00	Series 33 Console Operator's Guide 30070-90025 *
	Segmenter 30000-90011 \$3.40	System Utilities 30000-90044 \$4.80	Debug/Stack Dump 30000-90012 \$4.40	Error Messages 30000-90015 \$14.00	Index to MPE 30000-90045 \$3.70	
Utilities	EDIT 03000-90012 \$6.00	FCOPY 03000-90064 \$4.50	SORT 32214-90001 \$3.50	Compiler Library 30000-90028 \$8.50	Scientific Library 30000-90027 \$4.20	
Languages	Using COBOL 32213-90003 \$6.50	RPG Listing Analyzer 32104-90002 \$8.00	FORTRAN Pocket Guide 32102-90002 \$1.55	BASIC Pocket Guide 03000-90050 \$7.75	BASIC Compiler 32103-90001 \$2.90	SPL Pocket Guide 32100-90001 \$2.05
	COBOL 32213-90001 \$12.00	RPG 32104-90001 \$16.00	FORTRAN 30000-90040 \$8.50	BASIC Interpreter 30000-90026 \$10.50	BASIC for Beginners 03000-90025 \$6.00	APL Pocket Guide 32105-90003 \$4.40
Data Entry						SPL Textbook 30000-90025 \$7.50
	Data Entry Library 30000-90050 \$7.00	Introducing VIEW 32209-90004 *	VIEW Reference Manual 32209-90001 \$12.75	VIEW Operator's Guide 32209-90003 *	VIEW Programmer's Pocket Guide 32209-90002 *	
Data Management	KSAM 30000-90079 \$10.00	IMAGE 32215-90003 \$9.50	QUERY 30000-90042 \$7.50			
Data Communications	Guidebook to Data Communications 5955-1715 \$3.10	Data Communications Pocket Guide 30000-90105 \$14.00	RJE/3000 30000-90047 \$7.50	DS/3000 32190-90001 \$11.00	DS/3000 to DS/1000 32190-90005 \$7.25	MRJE/3000 92142-90001 \$8.75
Conversions	System/3 to HP 3000 Conversion 32104-90004 \$5.75	3000CX to Series II Conversion 30000-90046 \$3.30				

*Consult your Hewlett-Packard Sales Representative for current prices.

PERIPHERALS SITE PREPARATION DATA

Electrical Power

These peripherals for the HP 3000 operate on 115 volt, 60 Hz, single phase (U.S.) or optionally on 230 volt, 50 Hz, single phase (International).

Installation

Installation is provided by a factory-authorized Customer Engineer and is included in the list price of all peripherals.

Peripherals Summary Data					U.S.A.		
Description			Current	Heat Output Per Hour	Weight (Net)	Series 33 Cable Lengths	Series III Cable Lengths
Disc Drives	7906S	20 Mb Drive (Series 33)	6.3A	1640 BTU	270 lb	Notes 1,4	
	7920S	50 Mb Drive	6.3A	1800 BTU	315 lb	Notes 1,4	Note 1
	7925S	120 MB Drive	6.1A	1370 BTU	320 lb	Notes 1,4	Note 1
		Controller	2.4A	280 BTU			
Magnetic Tape Drives	7970B	800 BPI Drive (Series III)	2.5A	375 BTU	290 lb	Notes 4,5	Note 5
	7970E	1600 BPI Drive	3.3A	614 BTU	290 lb	Notes 4,5	Note 5
Line Printers	2608A	400 LPM	7.0A	2600 BTU	215 lb	Note 3	
	2613A	300 LPM	7.8A	3070 BTU	340 lb		50 ft.
	2617A	600 LPM	13A	5120 BTU	390 lb		50 ft.
	2618A	1250 LPM	17A	6600 BTU	800 lb		50 ft.
	2631A	180 CPS (Series 33)	2.5A	410 BTU	51 lb	Note 3	
Display Terminals	2640X	All Models	1.1A	300 BTU	44 lb	15 ft.	15 ft.
	2641A	APL Station	1.2A	325 BTU	44 lb	15 ft.	15 ft.
	2645X	All Models	1.4A	350 BTU	50 lb	15 ft.	15 ft.
	2647X	Intelligent Graphics	2.2A	560 BTU	50 lb	15 ft.	15 ft.
	2648A	Graphics Terminal	1.8A	460 BTU	50 lb	15 ft.	15 ft.
	2621A	Interactive Terminal	0.5A	137 BTU	35.5 lb	16 ft.	16 ft.
	2621P	Printing Terminal	1.2A	340 BTU	37.5 lb	16 ft.	16 ft.
Printing Terminal	2635A	180 CPS	2.5A	580 BTU	56 lb	12.5 ft	12.5ft.
Other	30104A	Paper Tape Reader	2.5A	683 BTU	42 lb		Note 2
	30105A	Paper Tape Punch	2A	683 BTU	35 lb		Note 2
	30106A	Card Reader	4.0A	1230 BTU	75 lb		25 ft.
	30119A	Card Reader/Punch	5.3A	1450 BTU	260 lb		50 ft.

Notes:

1. The maximum cumulative length of daisy-chained cable is 74 ft. (22.5m).
2. Mounted in cabinet.
3. Refer to Series 33 cabling diagram for printers.
4. The maximum length of HP-IB cable is 20 ft. (6m).
5. Multi-unit cables 20 ft. (6m).

Peripherals Summary Data			INTERNATIONAL				
Description			Current	Heat Output Per Hour	Weight (Net)	Series 33 Cable Lengths	Series III Cable Lengths
Disc Drives	7906S	20 Mb Drive (Series 33)	3.2A	410 KCAL	122 kg	Notes 1,4	
	7920S	50 Mb Drive	3.2A	450 KCAL	142 kg	Notes 1,4	Note 1
	7925S	120 Mb Drive	3.1A	340 KCAL	145 kg	Notes 1,4	Note 1
		Controller	1.2A	70 KCAL			
Magnetic Tape Drives	7970B	800 BPI Drive (Series III)	1.7A	100 KCAL	129 kg	Notes 4,5	Note 5
	7970E	1600 BPI Drive	1.7A	150 KCAL	129 kg	Notes 4,5	Note 5
Line Printers	2608A	400 LPM	3.7A	650 KCAL	97 kg	Note 3	
	2613A	300 LPM	5A	770 KCAL	155 kg		15.2m
	2617A	600 LPM } (Series III)	5A	1280 KCAL	168 kg		15.2m
	2618A	1250 LPM	8.5A	1650 KCAL	363 kg		15.2m
	2631A	180 CPS (Series 33)	1.3A	100 KCAL	24 kg	Note 3	
Display Terminals	2640X	All Models	0.6A	75 KCAL	20 kg	4.5m	4.5m
	2641A	APL Station	0.6A	80 KCAL	20 kg	4.5m	4.5m
	2645X	All Models	0.7A	90 KCAL	23 kg	4.5m	4.5m
	2647A	Intelligent Graphics	1.1A	140 KCAL	23 kg	4.5m	4.5m
	2648A	Graphics Terminal	0.9A	115 KCAL	23 kg	4.5m	4.5m
	2621A	Interactive Terminal	0.25A	35 KCAL	16.1 kg	5.0m	5.0m
	2621P	Printing Terminal	0.6A	85 KCAL	18 kg	5.0m	5.0m
Printing Terminal	2635A	180 CPS	1.3A	145 KCAL	24 kg	3.8m	3.8m
Other	30104A	Paper Tape Reader	1.25A	172 KCAL	19 kg		Note 2
	30105A	Paper Tape Punch	1A	172 KCAL	16 kg		Note 2
	30106A	Card Reader	2.0A	310 KCAL	34 kg		7.6m
	30119A	Card Reader/Punch	2.6A	365 KCAL	118 kg		15.2m

Notes:

1. The maximum cumulative length of daisy-chained cable is 74 ft. (22.5m)
2. Mounted in cabinet.
3. Refer to Series 33 cabling diagram for printers.
4. The maximum length of HP-IB cable is 20 ft. (6m).
5. Multi-unit cables 20 ft. (6m).

**For more information on
HP 3000 Computer Systems,
contact your local
Hewlett-Packard
representative, or write**

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General Systems Division
Marketing Dept.
5303 Stevens Creek Blvd.
Santa Clara, CA 95050
Telephone (408) 249-7020

In Europe: Hewlett-Packard S.A.
7, rue du Bois-du-Lan,
P.O. Box CH-1217 Meyrin 2
Geneva, Switzerland
Tel: (022) 82 70 00

In Japan: Yokogawa-Hewlett-Packard
59-1, Yoyogi 1-chome
Shibuya-ku, Tokyo, 151
Tel: 03-370-2281

In Canada: Hewlett-Packard Ltd.
6877 Goreway Drive
Mississauga, Ontario L4V 1L9
Tel: (416) 678-9430

Other International Locations:
Hewlett-Packard
3200 Hillview Ave.
Palo Alto, Calif. U.S.A. 94304
Tel: (415) 493-1501

